

KIC 003234139

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
003234139-01	OBS	No	522.751388	253.671687	75.1	2.885	15.6	1.0	1.21	5984	1.23	1.05
003234139-02	OBS	No	369.897813	186.115725	427.6	15.245	13.8	3.9	1.21	5984	2.67	1.67
003234139-03	OBS	No	638.955452	223.850012	303.6	7.134	12.6	2.6	1.21	5984	2.37	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003234139-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_SATURATED
003234139-02	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED—HALO_GHOST
003234139-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

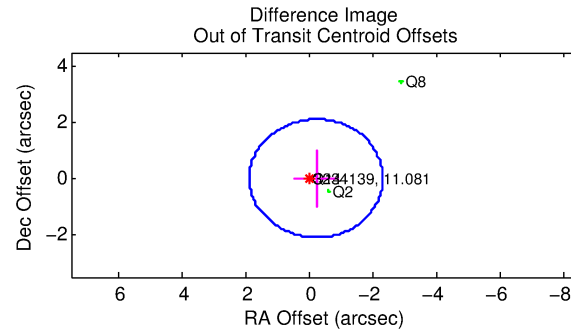
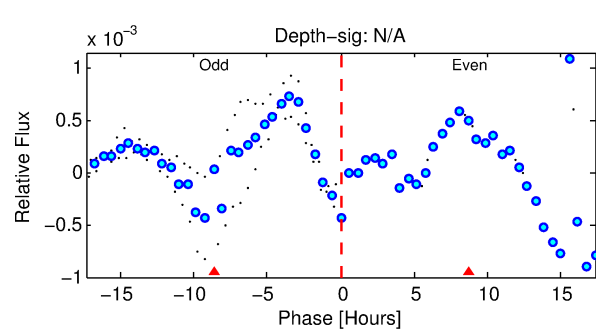
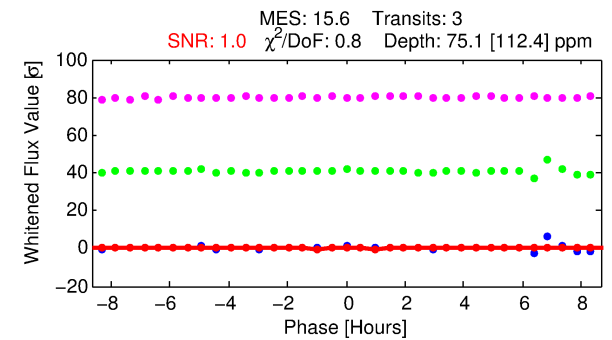
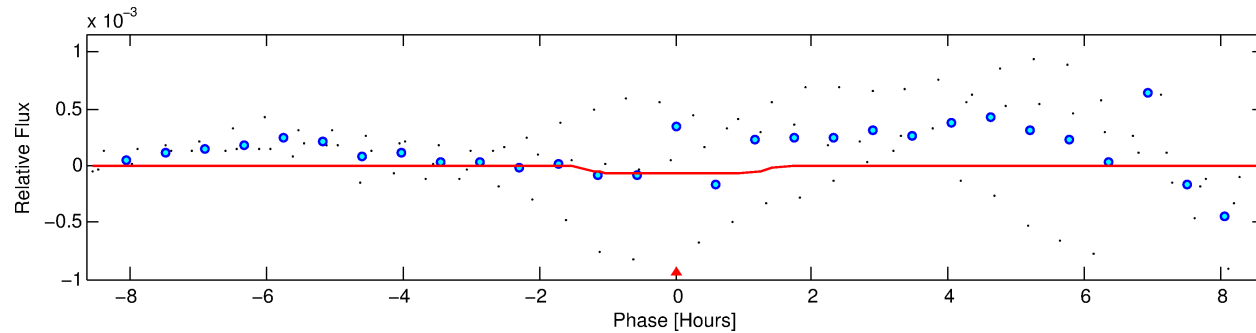
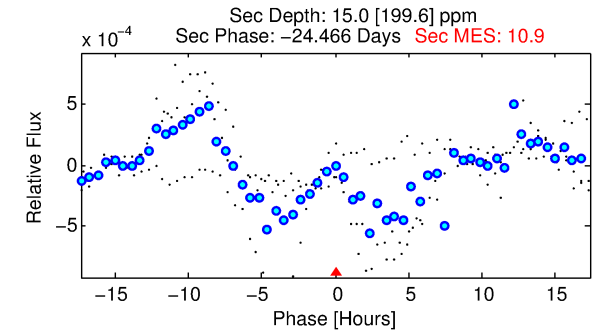
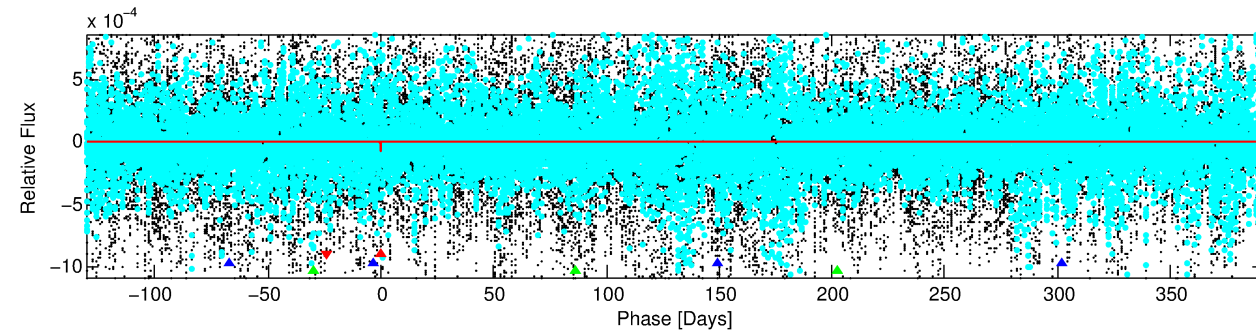
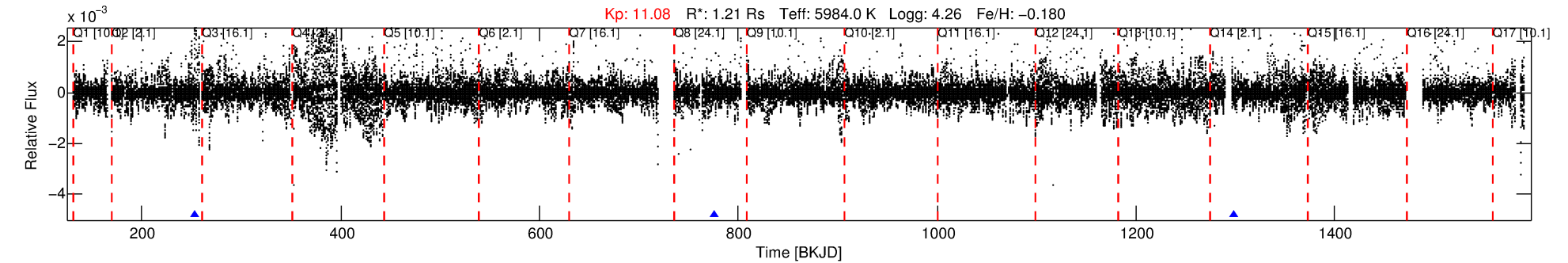
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003234139-01

No Significant Match Found

DV One-Page Summary

KIC: 3234139 Candidate: 1 of 3 Period: 522.751 d



DV Fit Results:

Period = 522.75139 [0.02708] d
Epoch = 253.6717 [0.0355] BKJD
Rp/R* = 0.0094 [0.0389]
a/R* = 637.81 [13380.16]
b = 0.90 [4.62]
Seff = 1.05 [0.42]
Teq = 258 [26] K
Rp = 1.23 [5.13] Re
a = 1.2593 [0.3154] AU
Ag = 8626.17 [135412.15] [0.06σ]
Teffp = 3849 [15103] K [0.24σ]

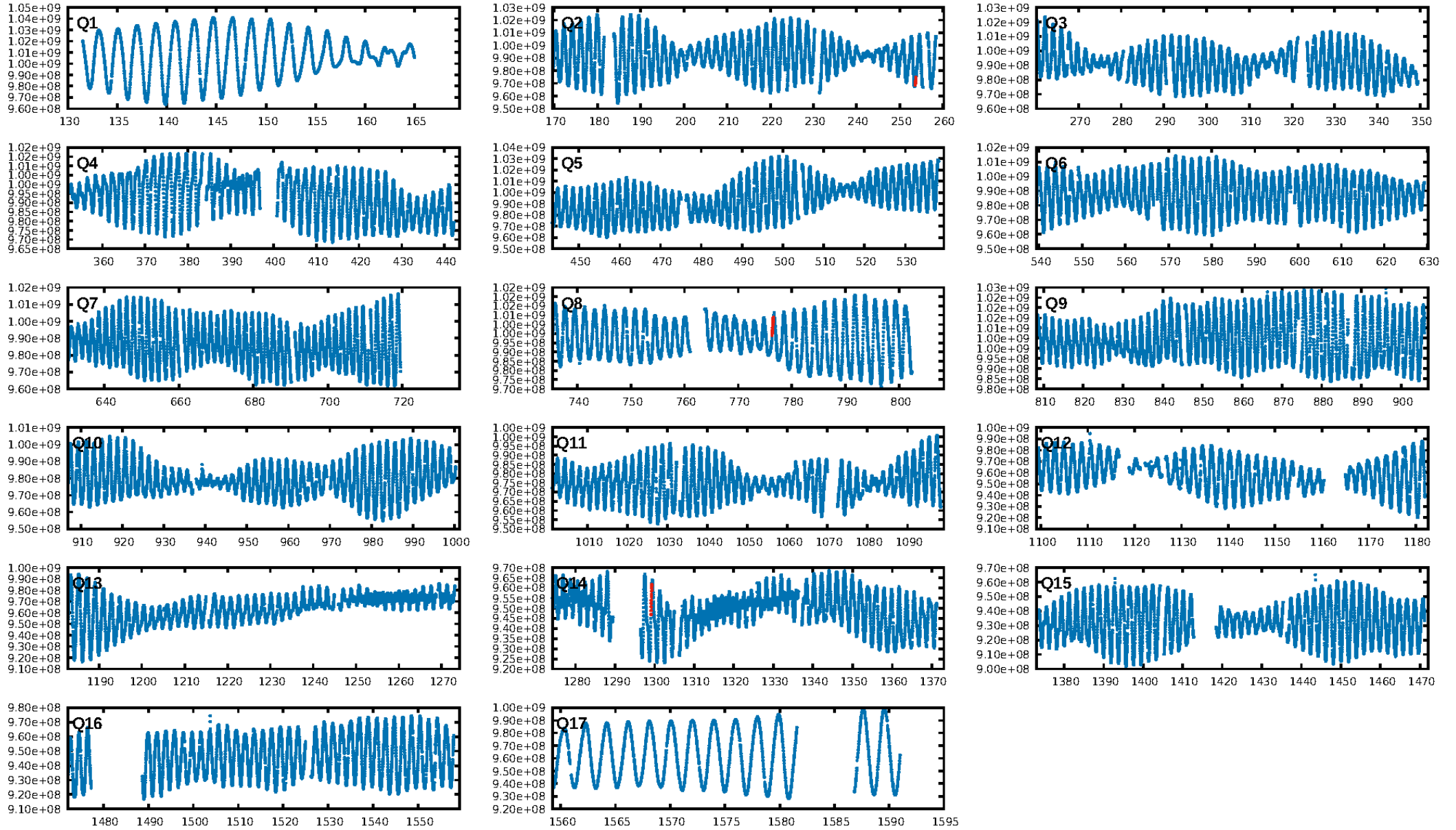
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [236.44σ]
LongPeriod-sig: 100.0% [362.42σ]
ModelChiSquare2-sig: 21.4%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 5.26e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.6059
Centroid-sig: 62.4%
Centroid-so: 2.662 arcsec [0.51σ]
OotOffset-rm: 0.208 arcsec [0.30σ]
KicOffset-rm: 0.255 arcsec [0.50σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

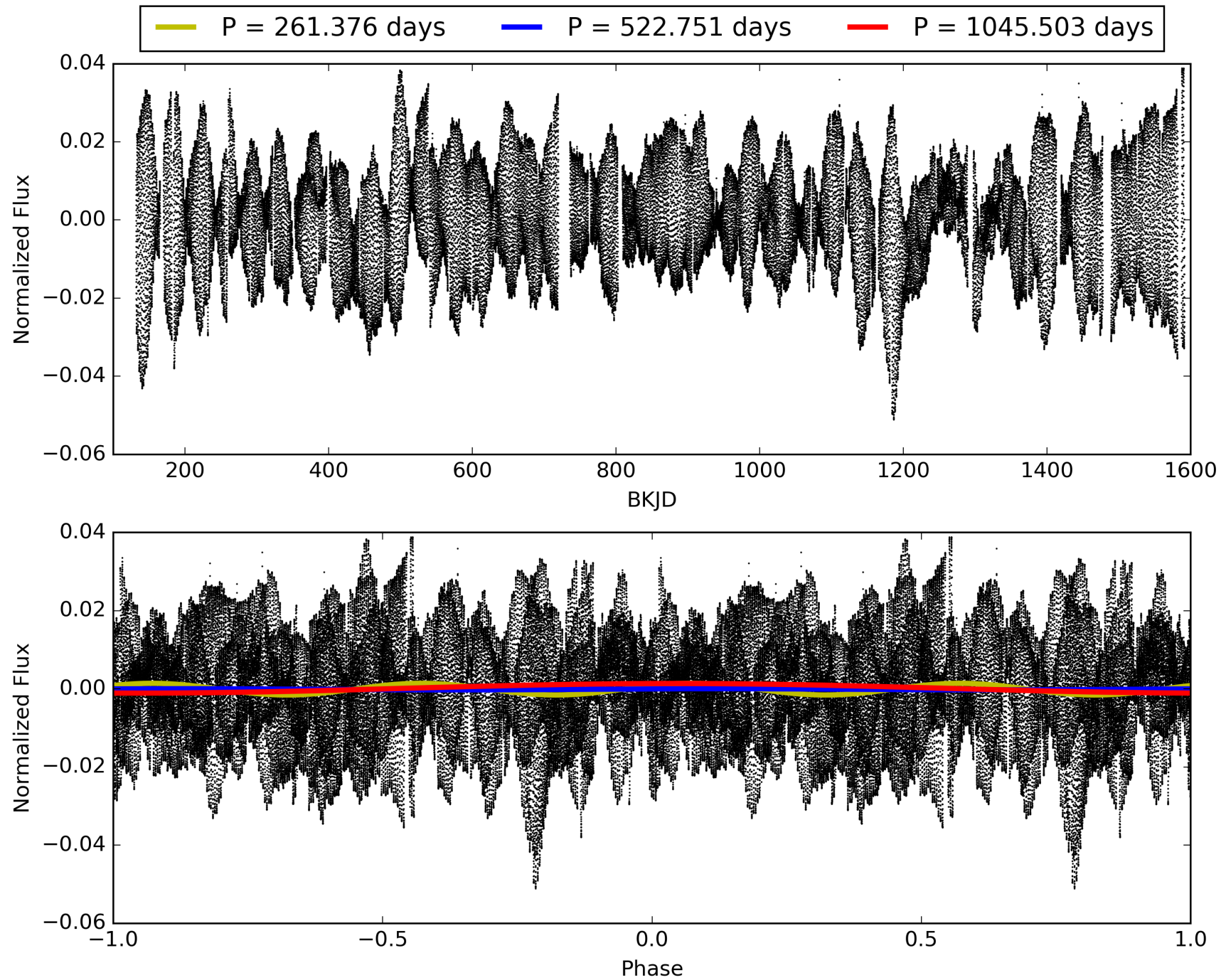
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 06:29:50 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003234139-01, PDC Light Curves

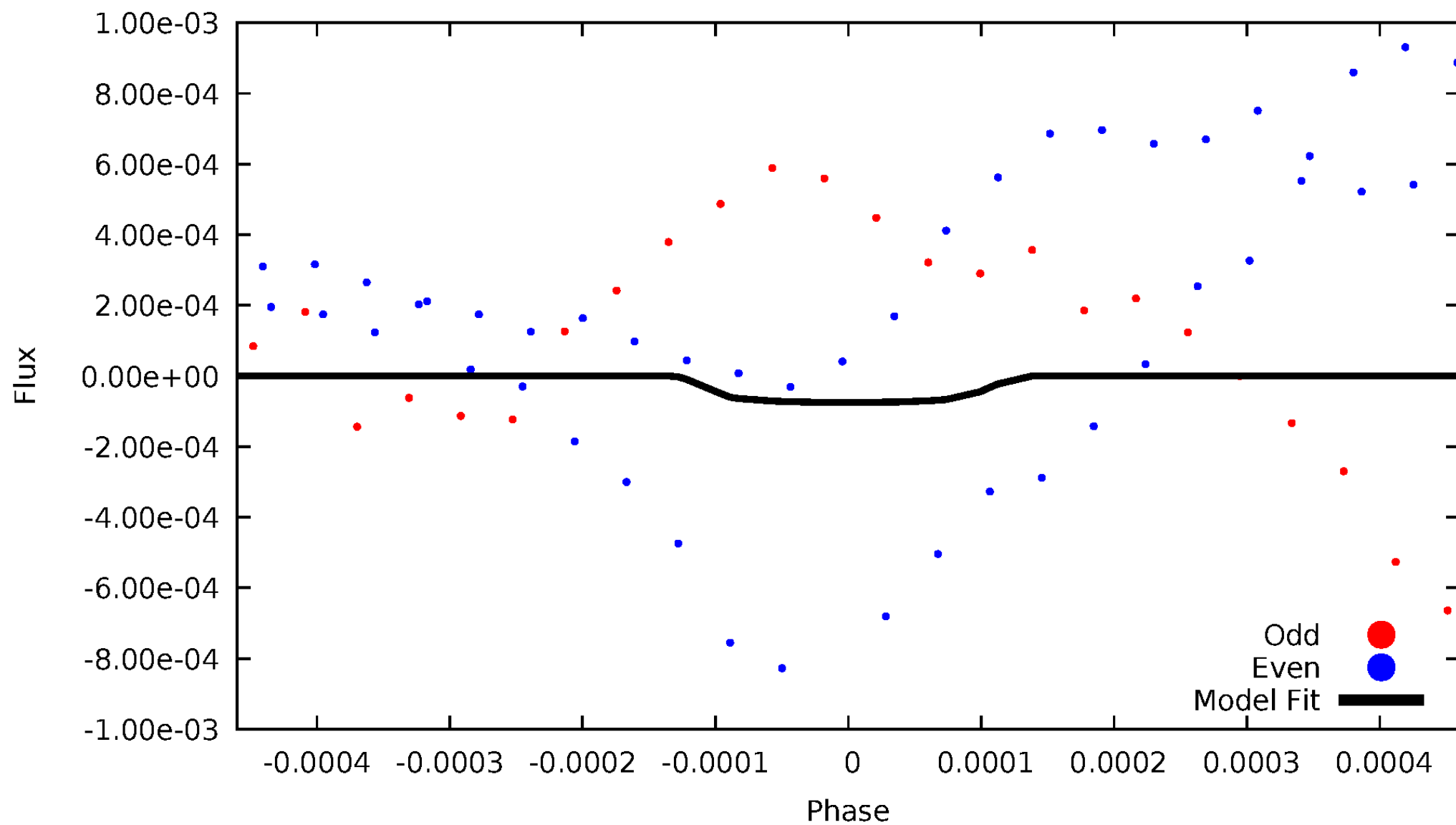


TCE 003234139-01



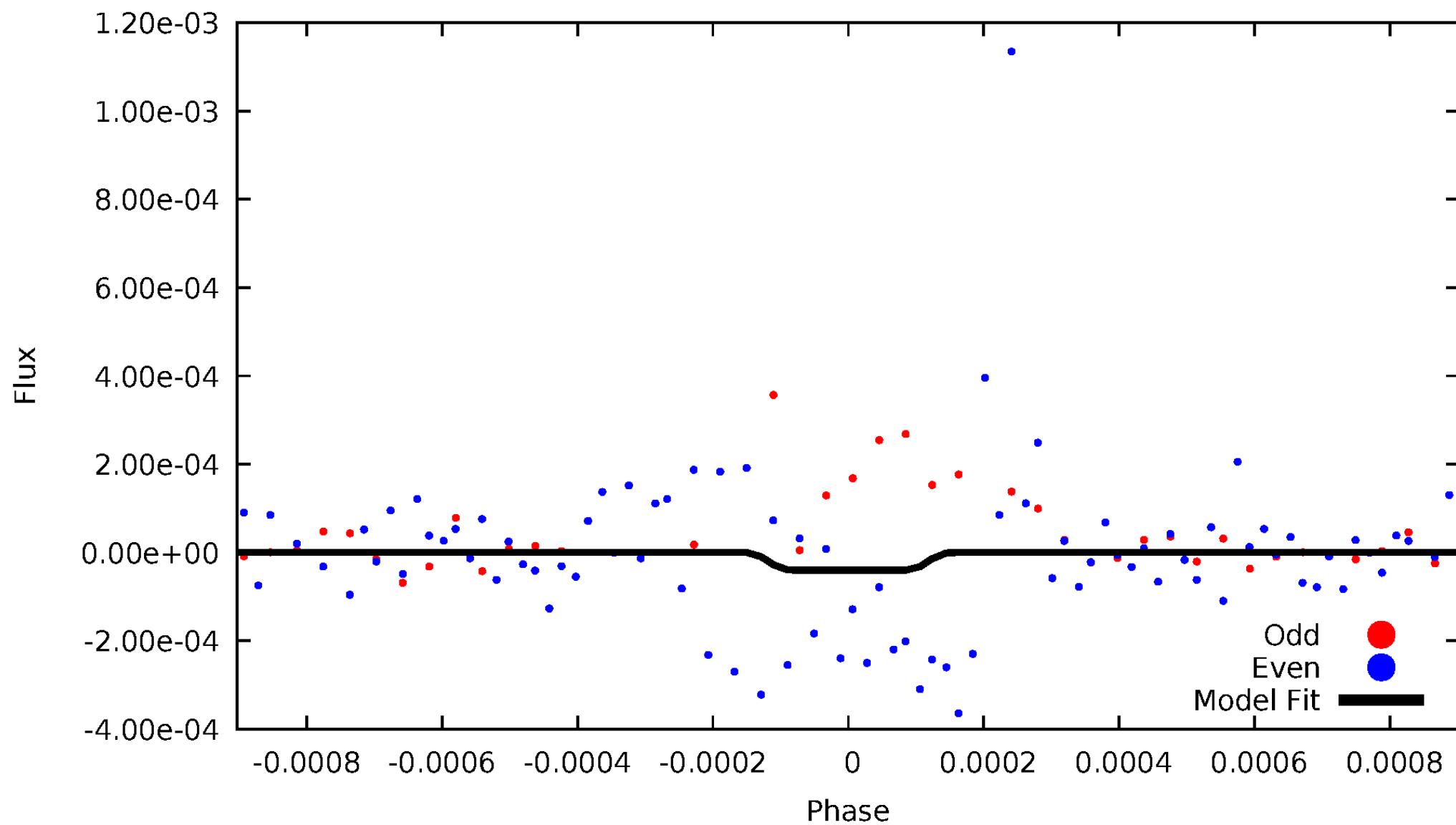
DV Odd/Even

TCE 003234139-01



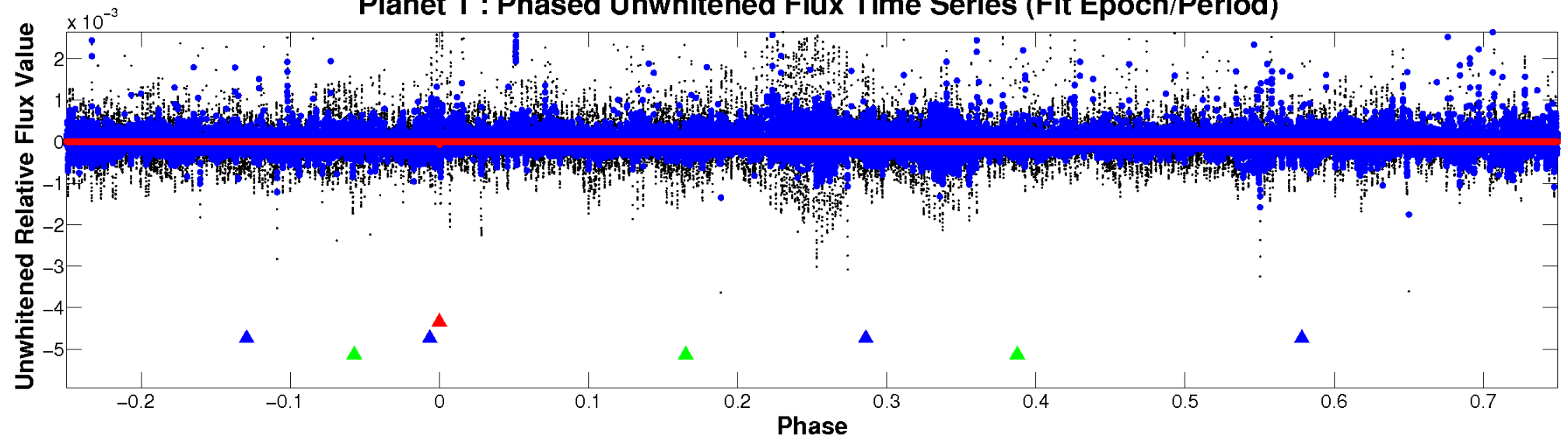
ALT Odd/Even

TCE 003234139-01

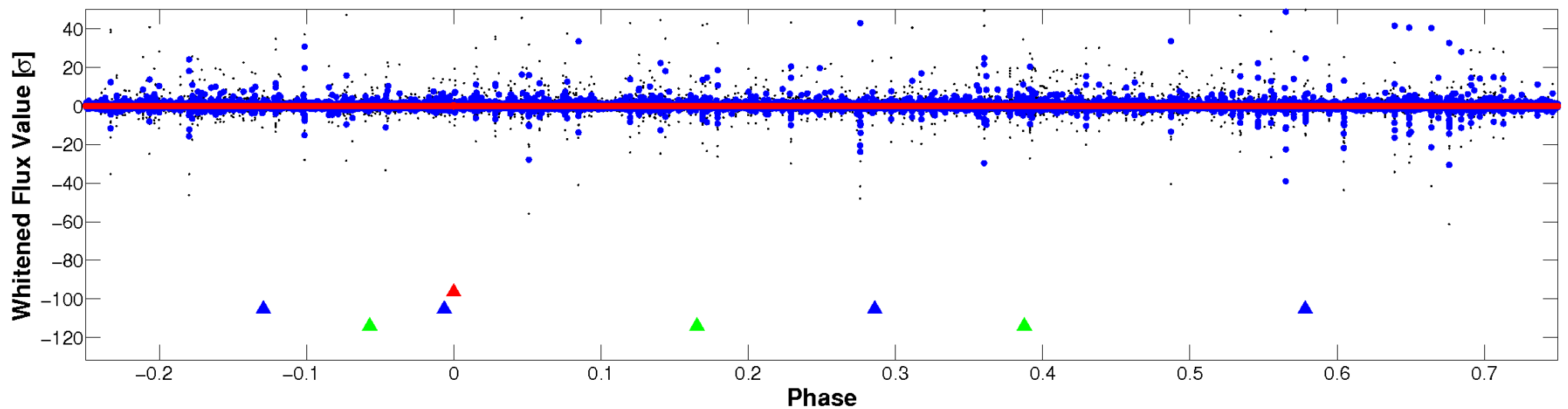


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

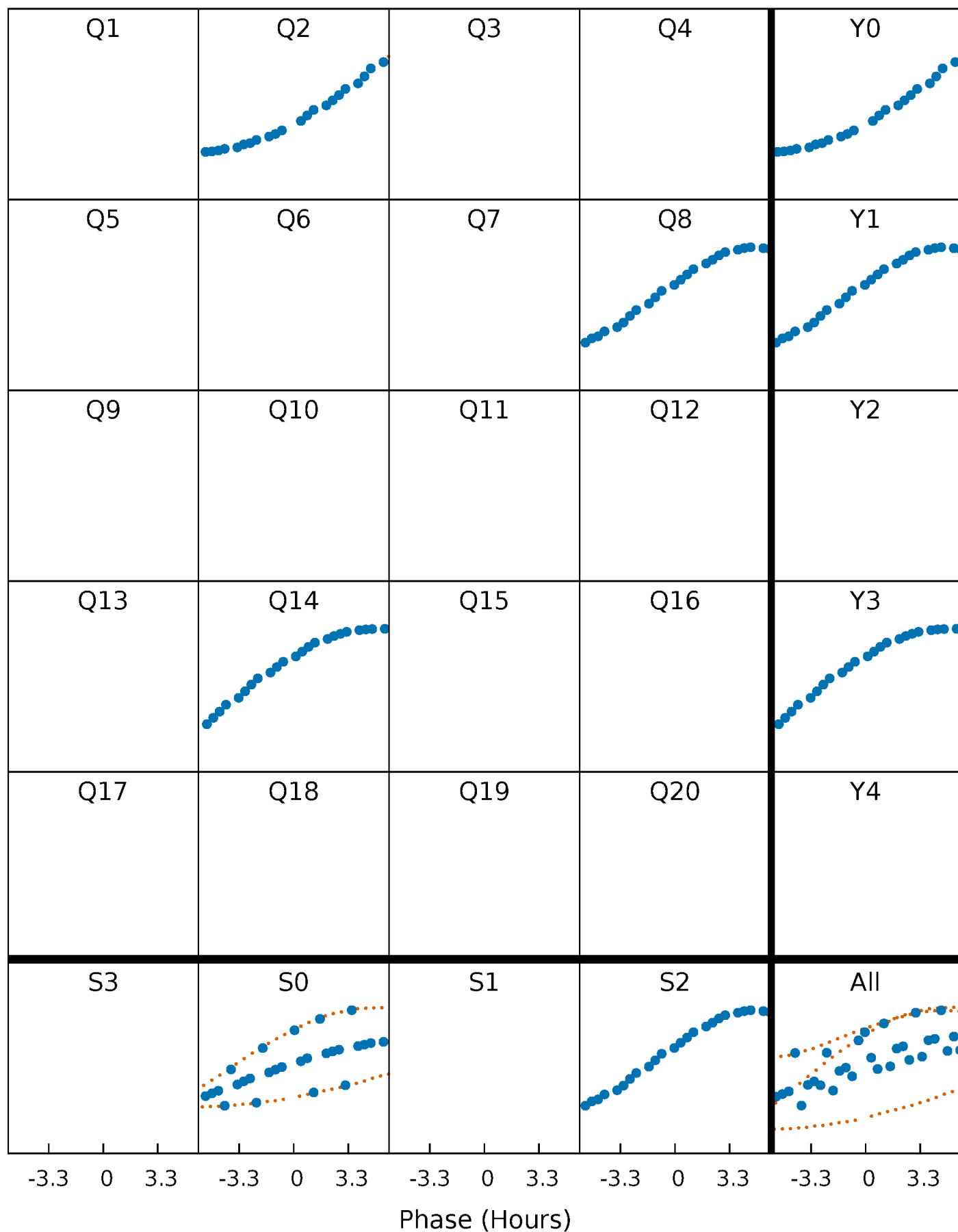


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



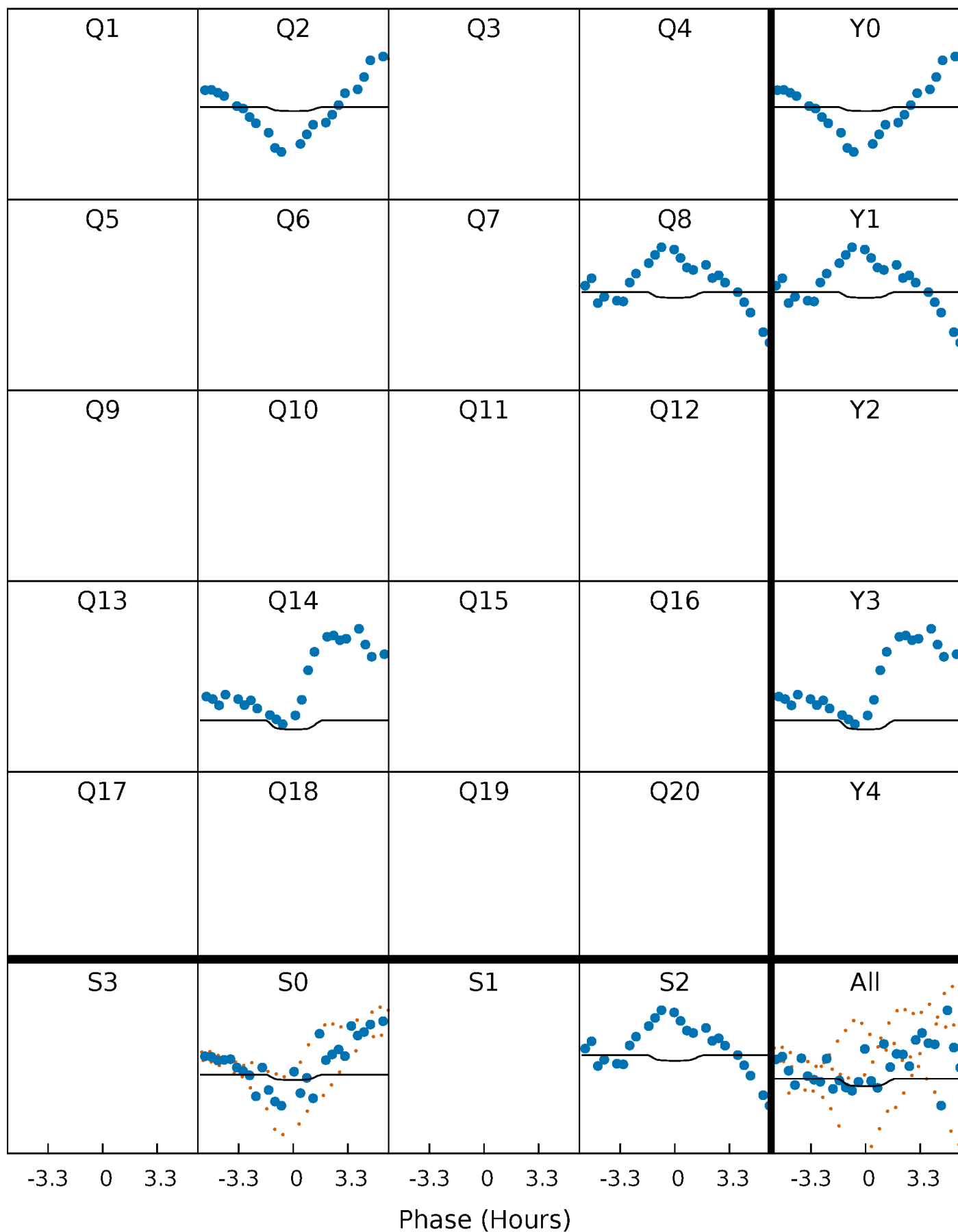
PDC Quarter-Phased Transit Curves

TCE 003234139-01 P=522.751388 Days $T_0=253.671687$ (BKJD)



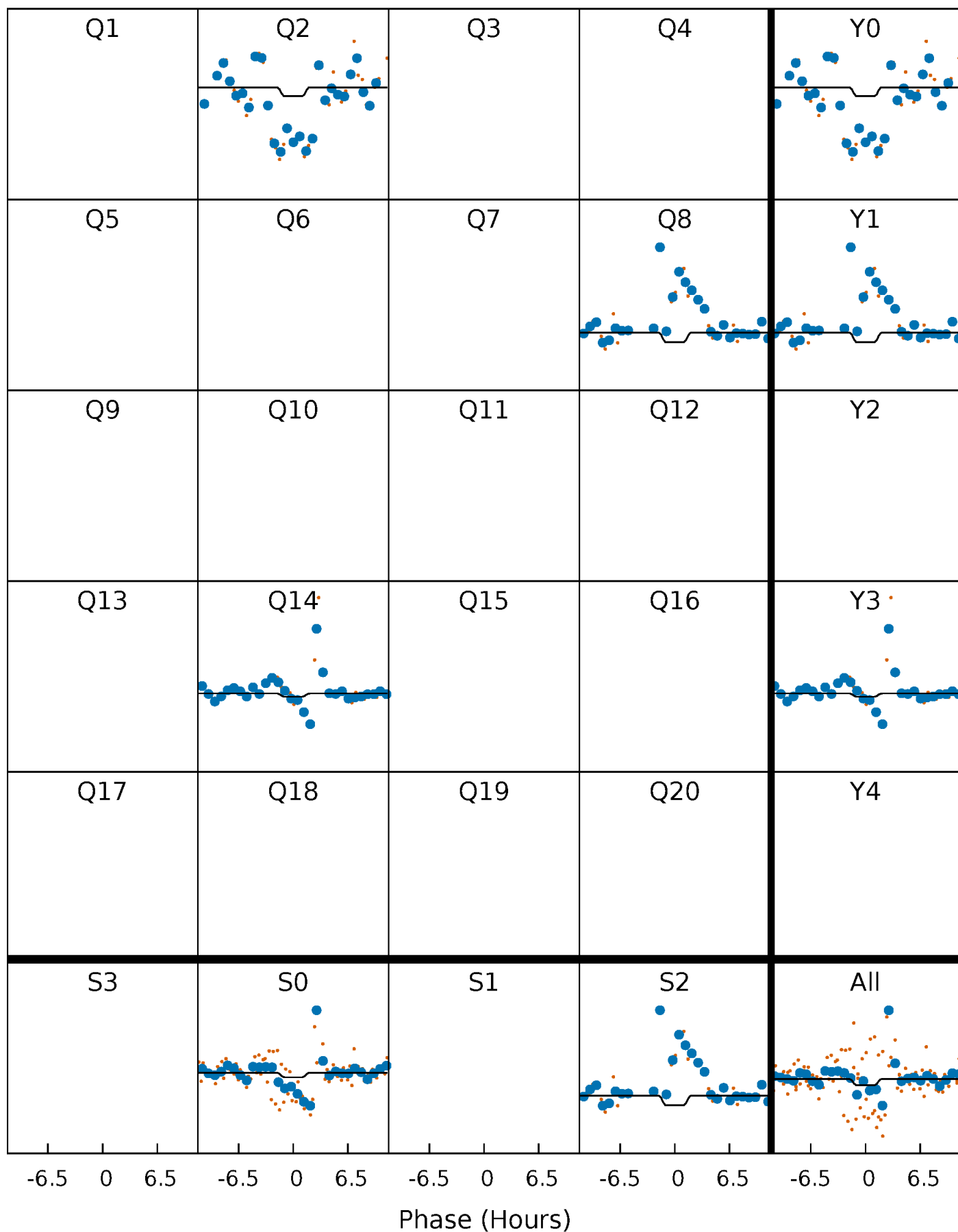
DV Quarter-Phased Transit Curves

TCE 003234139-01 P=522.751388 Days $T_0=253.671687$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

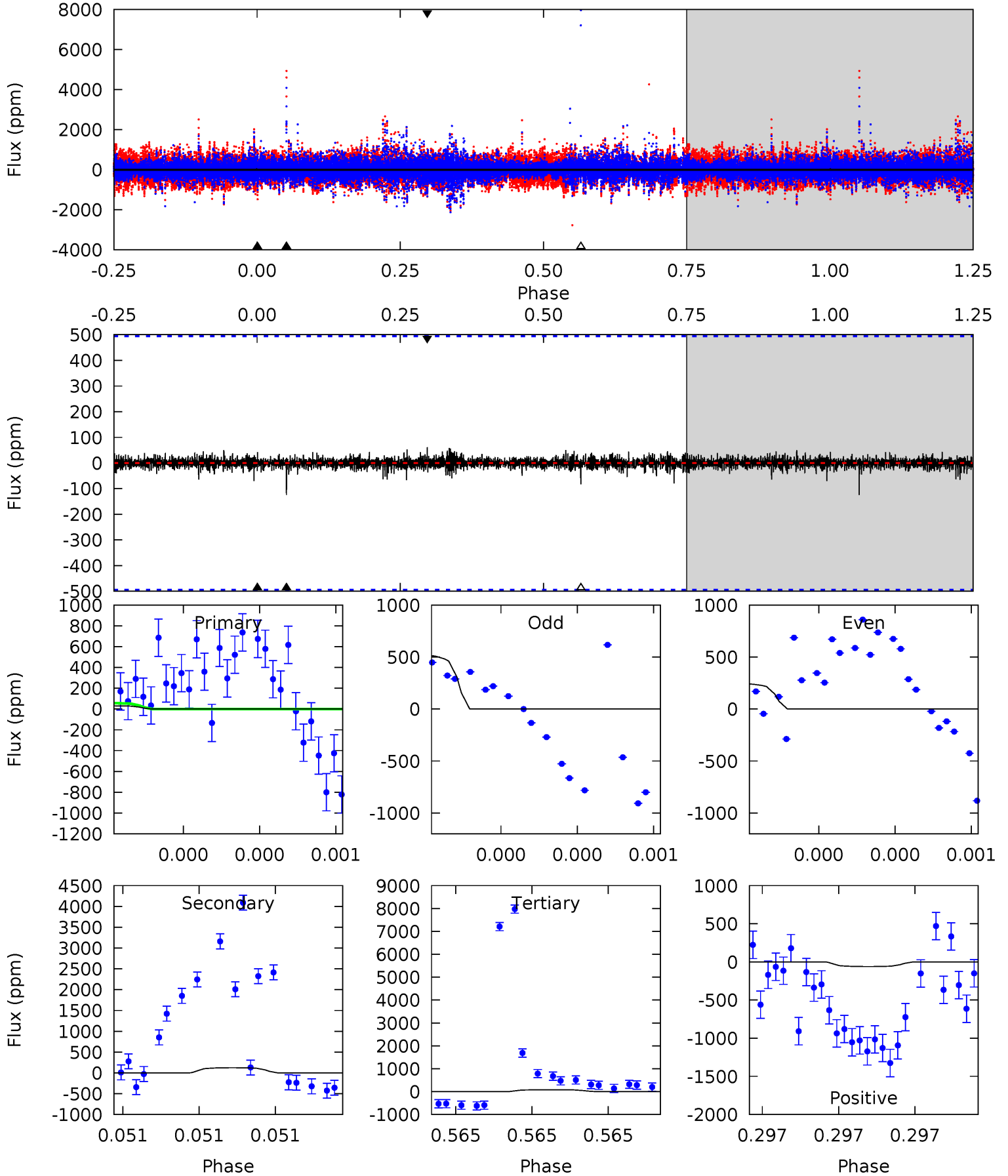
TCE 003234139-01 P=522.738143 Days $T_0=254.060334$ (BKJD)



DV Model-Shift Uniqueness Test

003234139-01, P = 522.751388 Days, E = 253.671687 Days

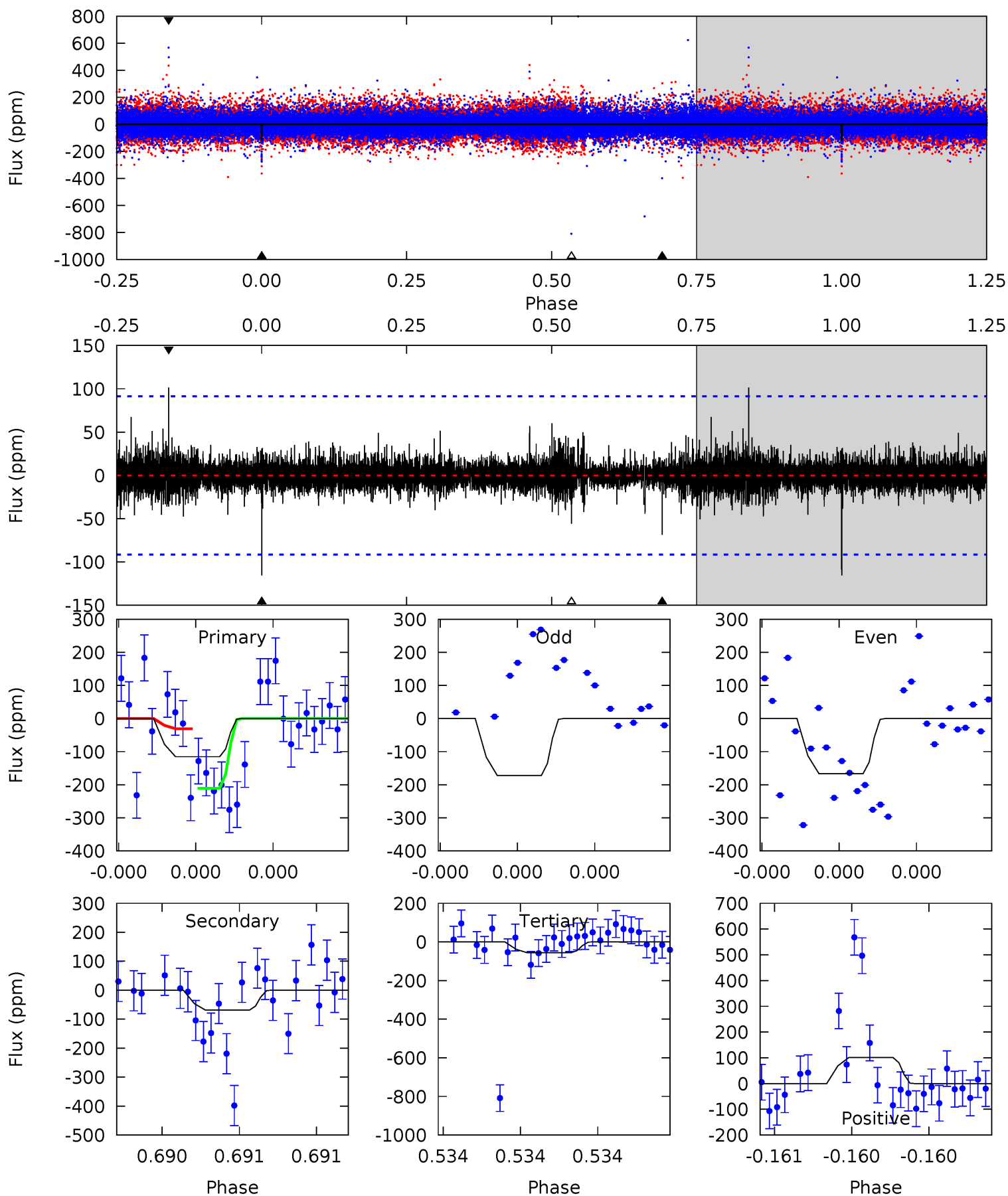
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.36	1.43	0.95	0.71	5.70	3.68	0.14	-0.59	-0.35	0.48	0.73	1.41	-0.16	0.33	0.29



Alt Model-Shift Uniqueness Test

003234139-01, P = 522.738143 Days, E = 254.060334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.17	4.25	3.47	6.29	5.68	3.64	0.62	3.70	0.89	0.78	-2.03	0.15	0.60	0.47	5.62



Stellar Parameters For KIC 003234139

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5984^{+188}_{-209}	$4.264^{+0.209}_{-0.190}$	$-0.180^{+0.300}_{-0.300}$	$1.206^{+0.348}_{-0.285}$	$0.975^{+0.156}_{-0.113}$	$0.782^{+0.798}_{-0.400}$
	+3%/-3%	+5%/-4%	+167%/-167%	+29%/-24%	+16%/-12%	+102%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003234139-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-124 ± 87	$3.96^{+3.97}_{-2.62}$	360^{+29}_{-25}	3830^{+2064}_{-1019}	5724^{+40315}_{-5025}
Alt.	-68 ± 16	$3.79^{+4.16}_{-2.66}$	361^{+27}_{-27}	3592^{+2026}_{-686}	4246^{+37810}_{-3348}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

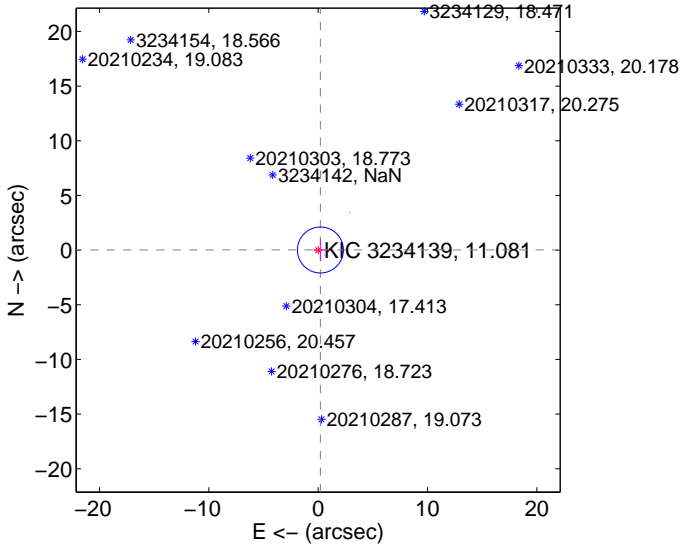
Supplemental centroid analysis for 003234139-01. **Kepler magnitude: 11.08.** Transit SNR 1.01

There are 1 quarters with good PRF difference image offsets

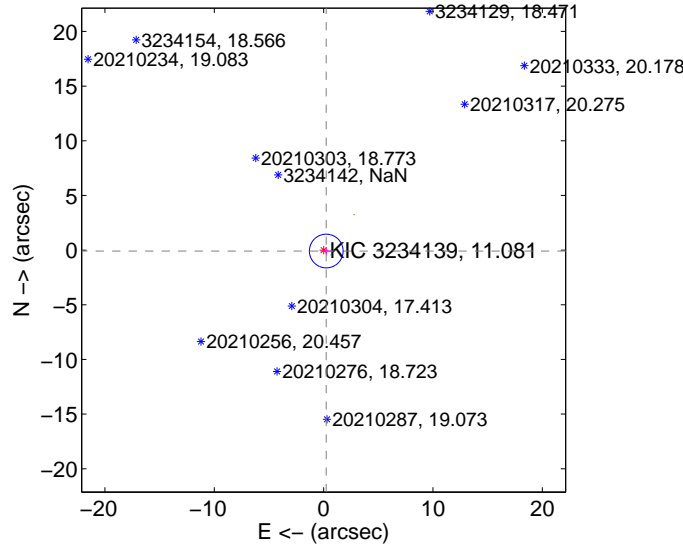
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.208 ± 0.701	0.30	-0.208 ± 0.651	0.011 ± 0.990
PRF-fit source offset from KIC position	0.255 ± 0.514	0.50	-0.241 ± 0.532	-0.084 ± 0.332
photometric centroid source offset	2.66 ± 5.26	0.51	1.86 ± 3.84	-1.91 ± 6.32

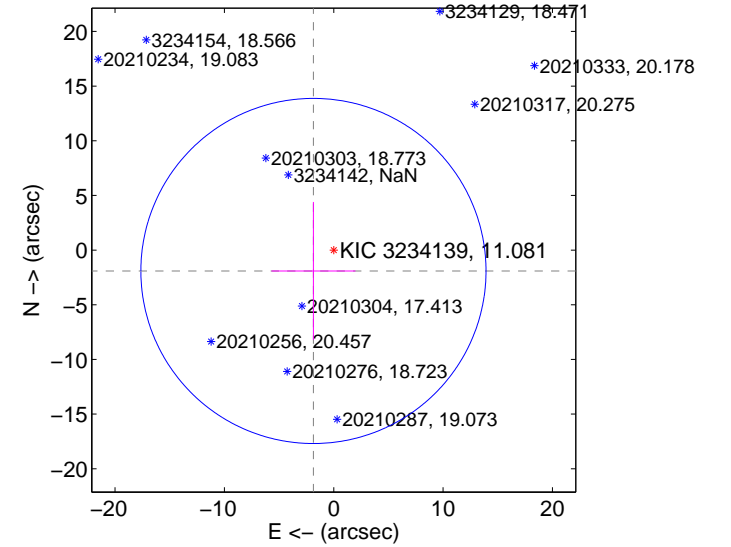
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

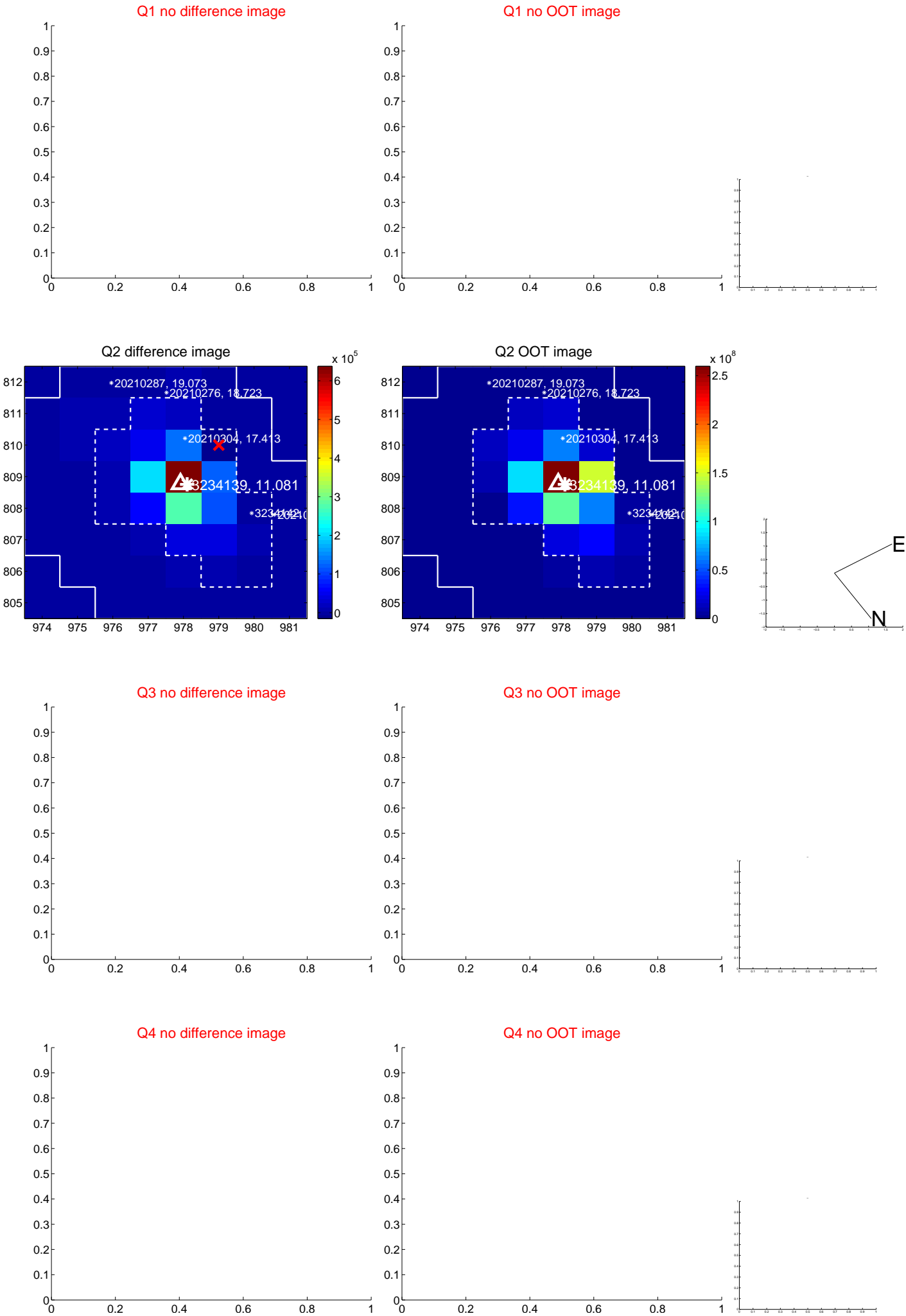


offset from photometric centroids

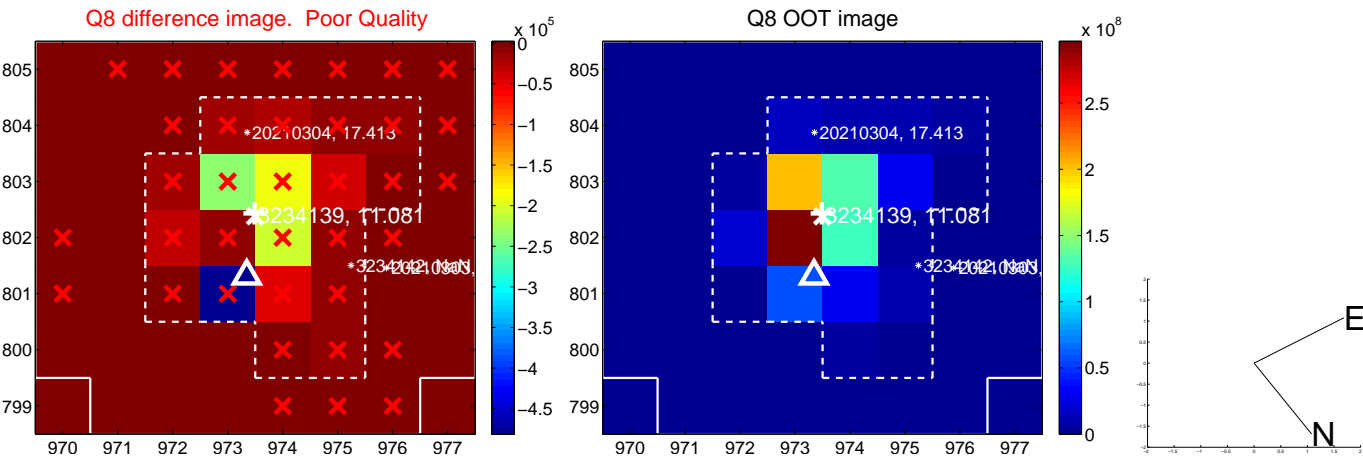


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

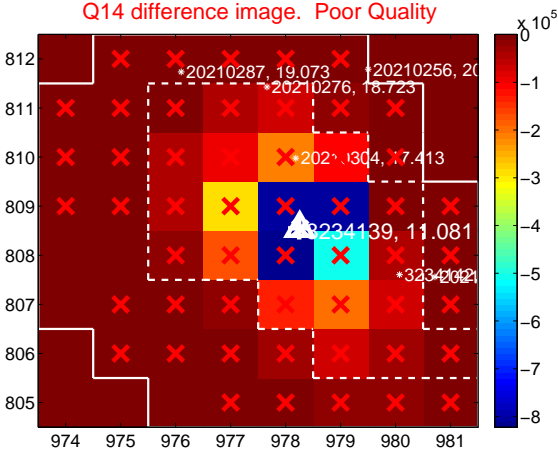
Q13 no difference image



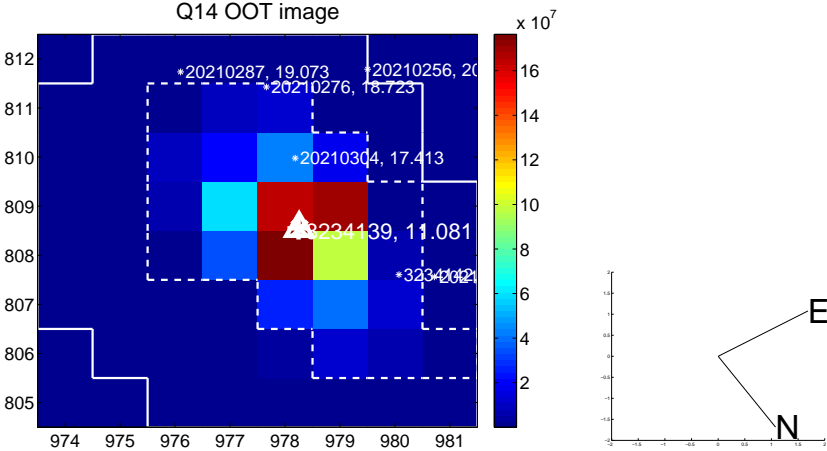
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



Q15 no difference image



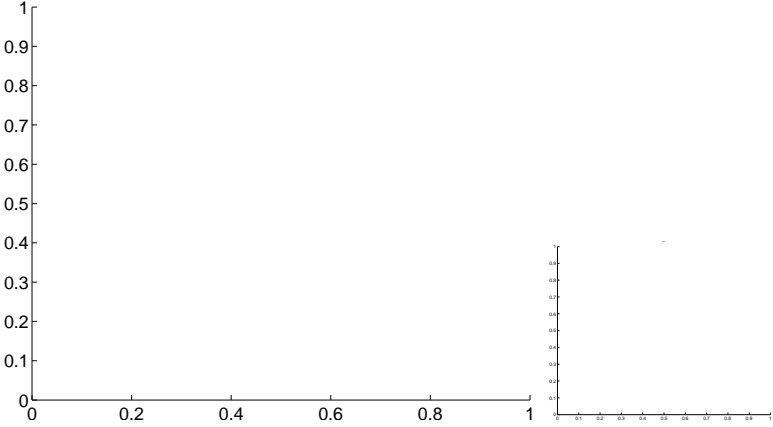
Q15 no OOT image



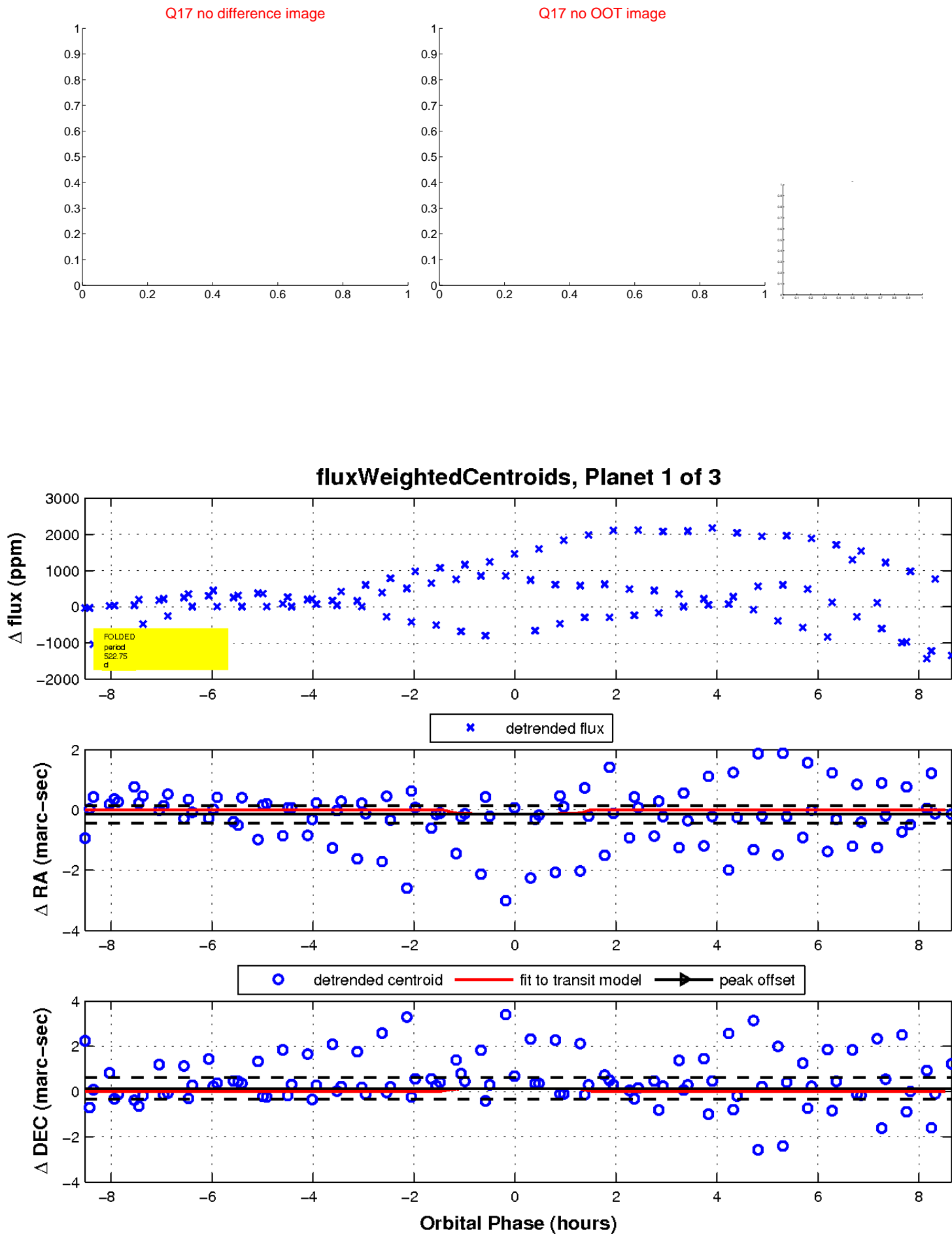
Q16 no difference image



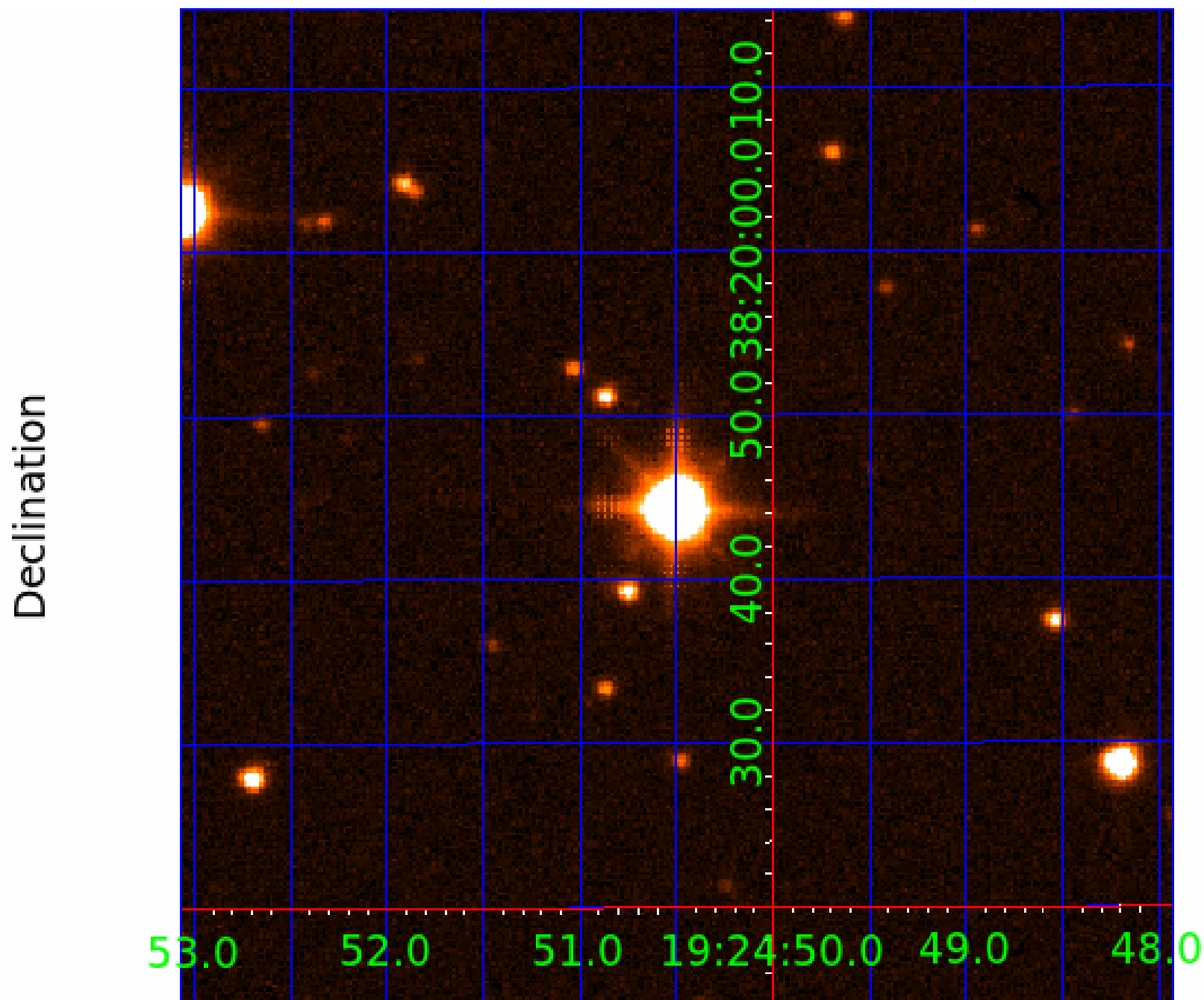
Q16 no OOT image



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image



KIC 003234139

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
003234139-01	OBS	No	522.751388	253.671687	75.1	2.885	15.6	1.0	1.21	5984	1.23	1.05
003234139-02	OBS	No	369.897813	186.115725	427.6	15.245	13.8	3.9	1.21	5984	2.67	1.67
003234139-03	OBS	No	638.955452	223.850012	303.6	7.134	12.6	2.6	1.21	5984	2.37	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003234139-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
003234139-02	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED—HALO_GHOST
003234139-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

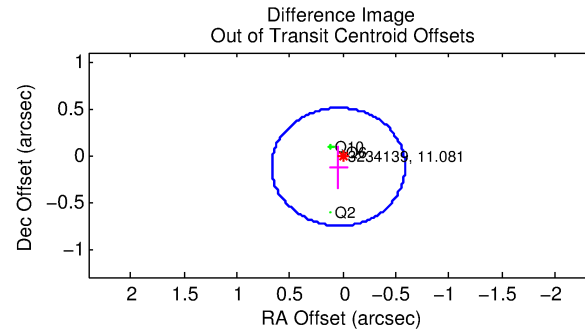
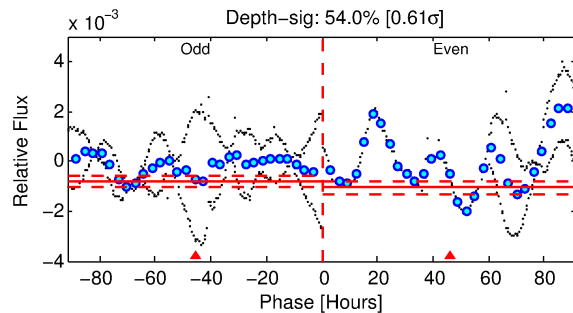
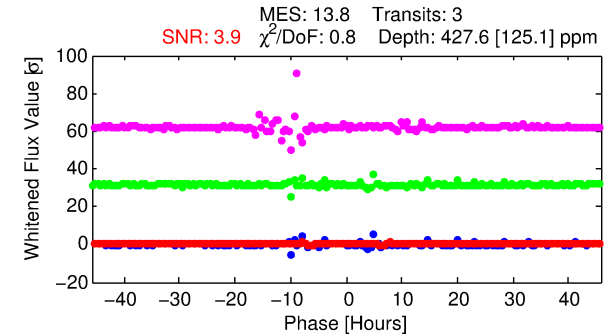
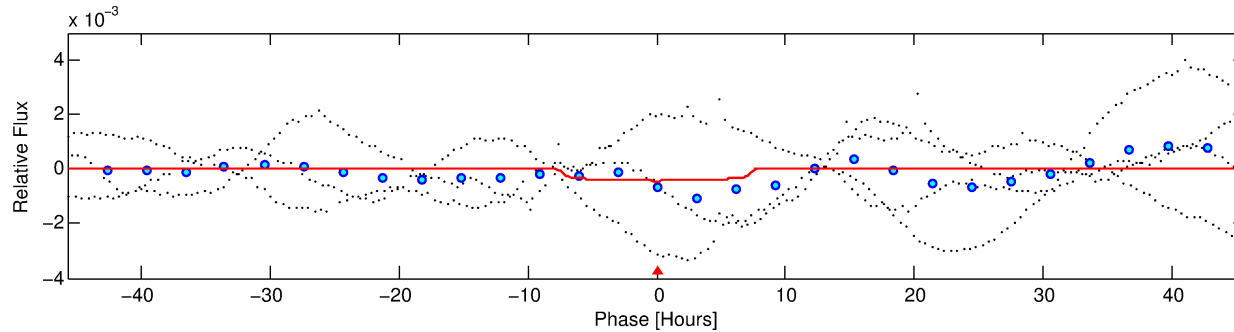
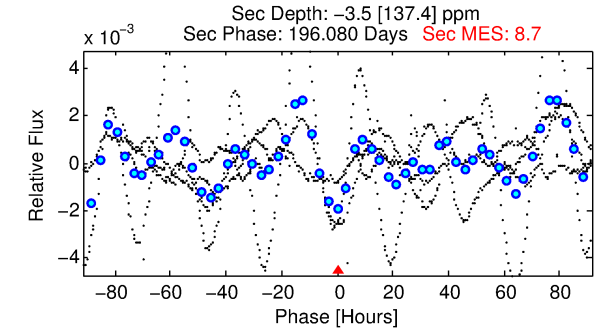
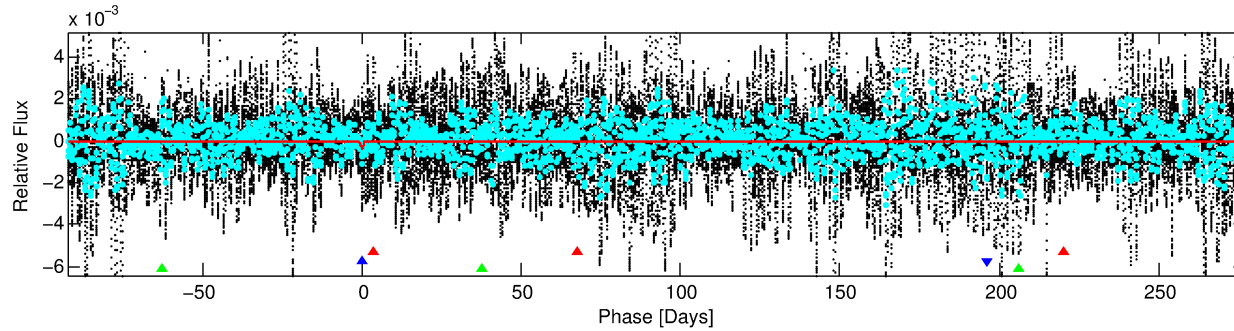
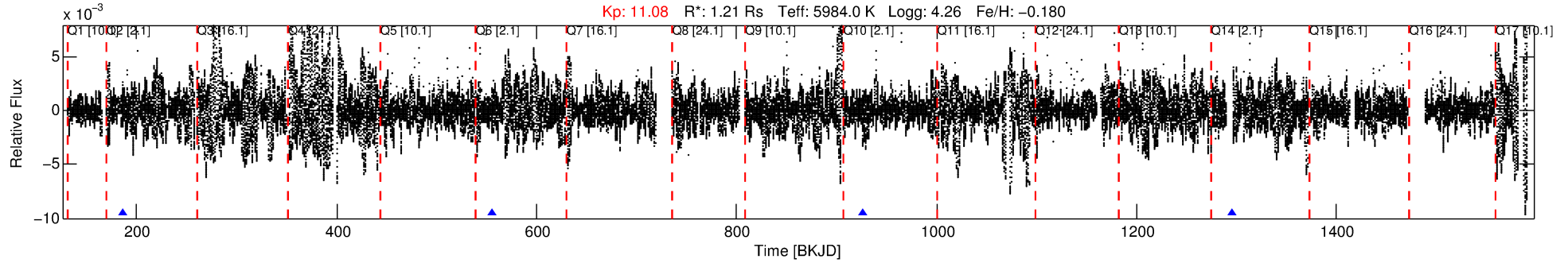
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003234139-02

No Significant Match Found

DV One-Page Summary

KIC: 3234139 Candidate: 2 of 3 Period: 369.898 d



DV Fit Results:

Period = 369.89781 [0.00384] d
Epoch = 186.1157 [0.0055] BKJD
Rp/R* = 0.0203 [0.0040]
a/R* = 136.32 [52.20]
b = 0.71 [0.27]
Seff = 1.67 [0.67]
Teq = 290 [29] K
Rp = 2.67 [0.93] Re
a = 1.0000 [0.2505] AU
Ag = N/A
Teffp = N/A

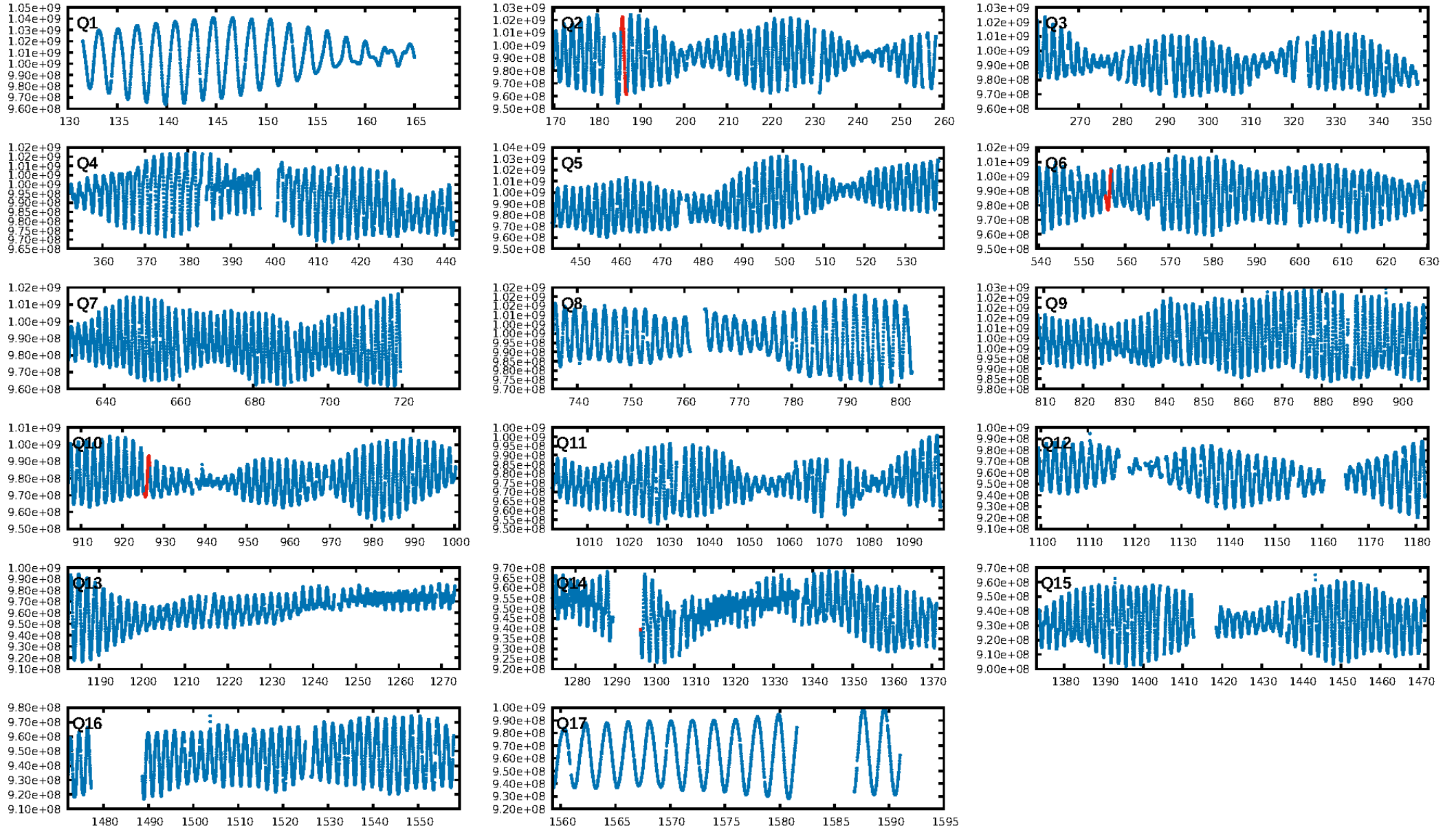
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [236.44 σ]
ModelChiSquare2-sig: 78.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.98e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2378
Centroid-sig: 0.0%
Centroid-so: 1.358 arcsec [2.13 σ]
OotOffset-rm: 0.130 arcsec [0.62 σ]
KicOffset-rm: 0.202 arcsec [0.94 σ]
OotOffset-st: 3/0/0 [3]
KicOffset-st: 3/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

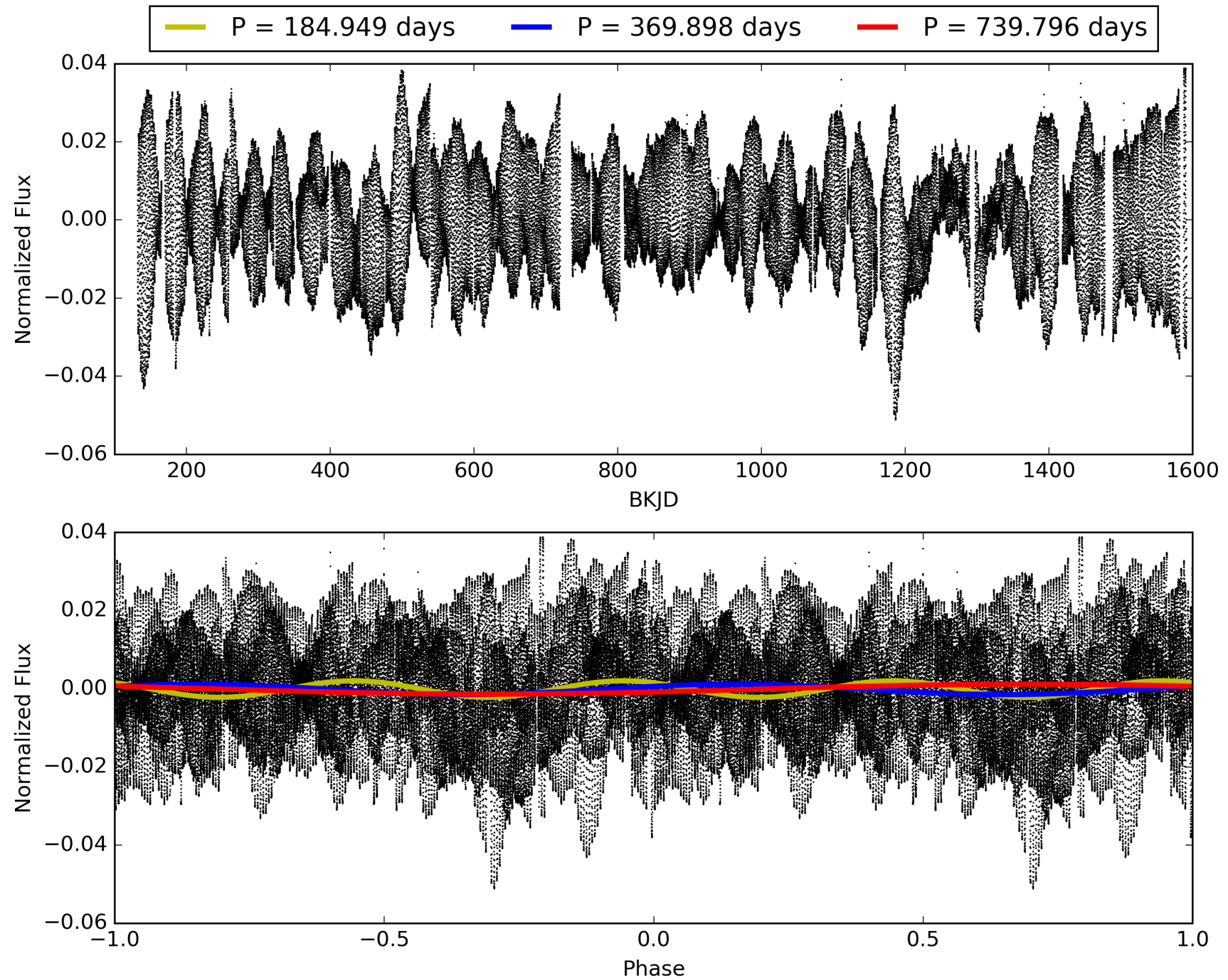
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 06:29:59 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003234139-02, PDC Light Curves

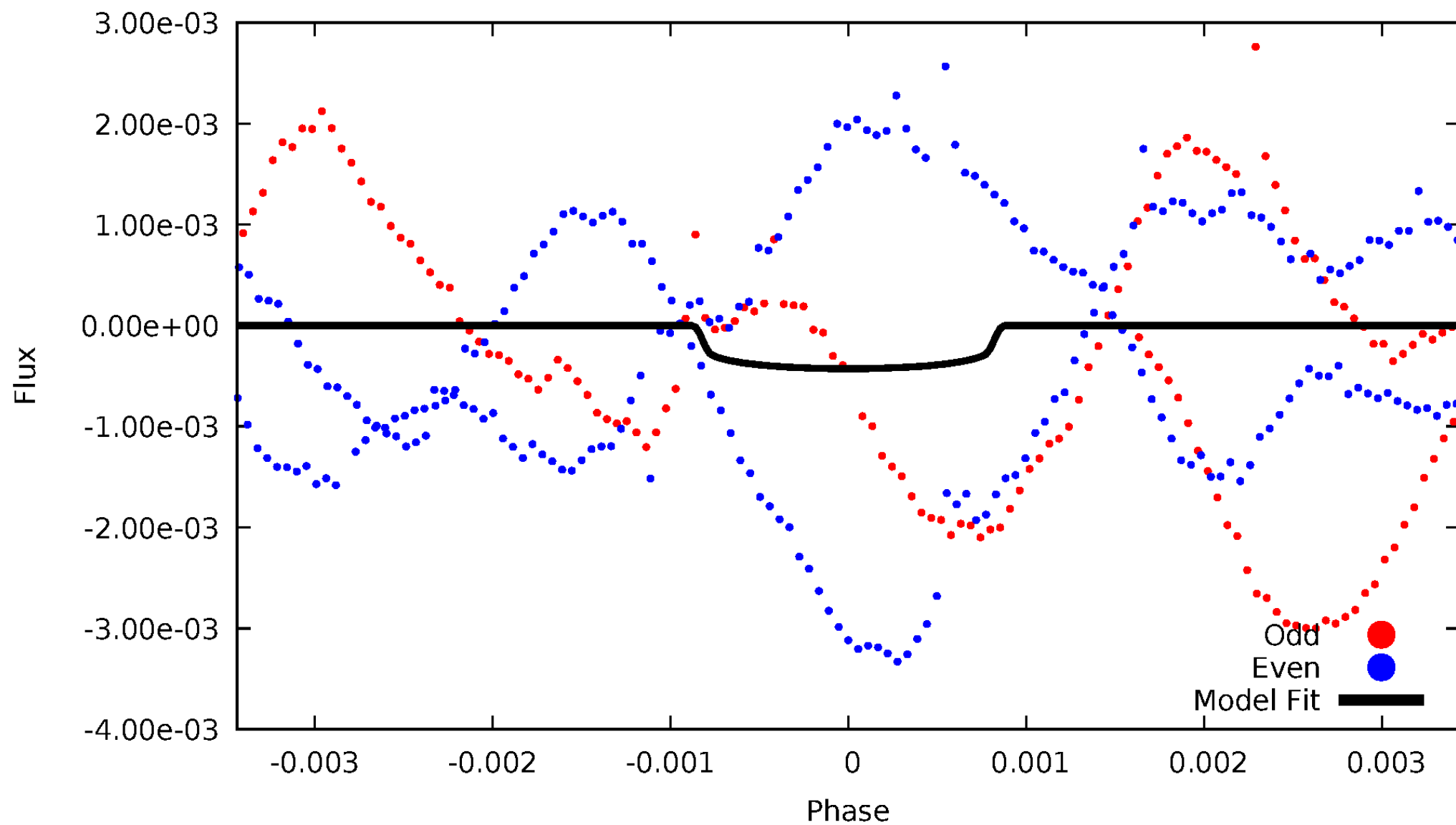


TCE 003234139-02



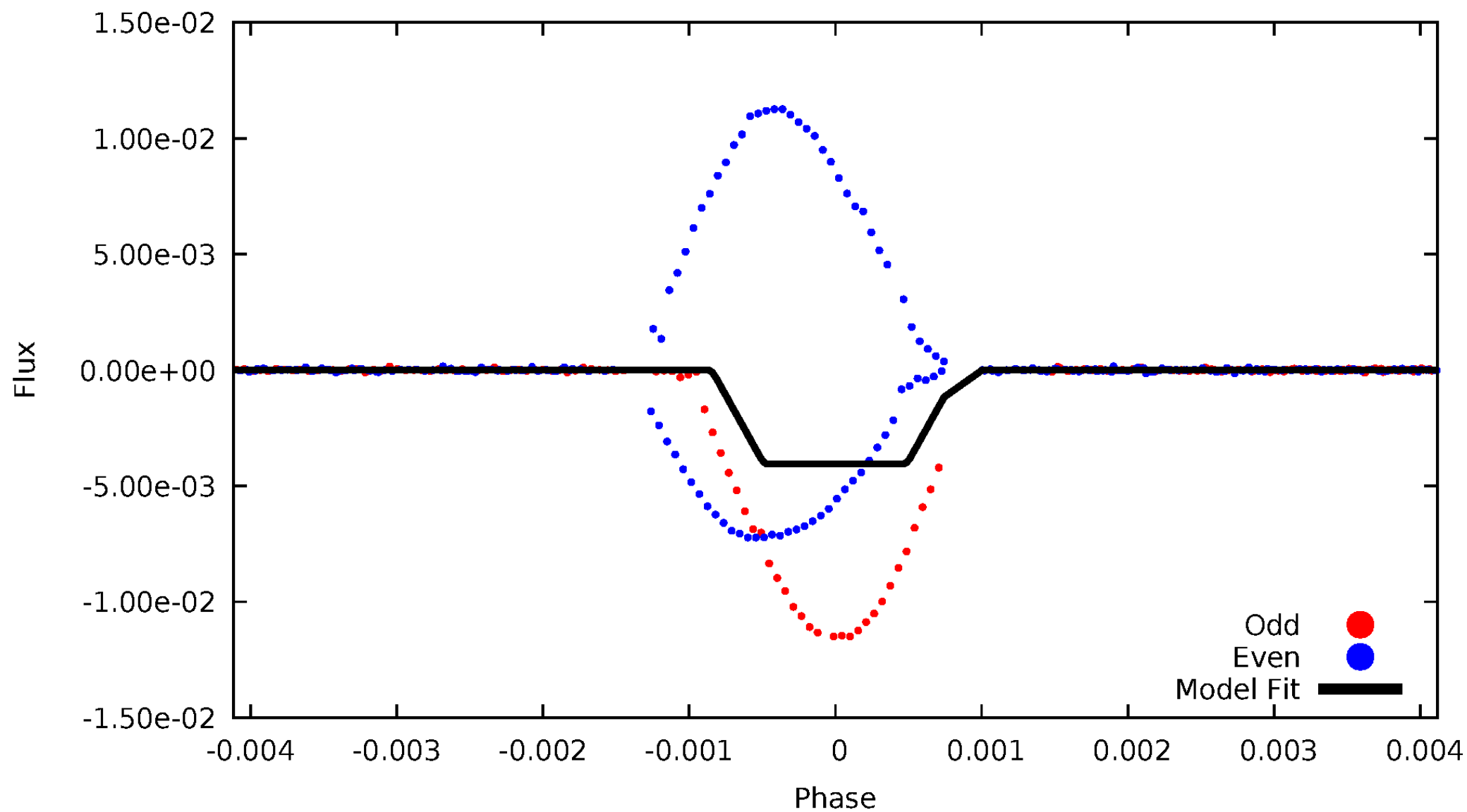
DV Odd/Even

TCE 003234139-02



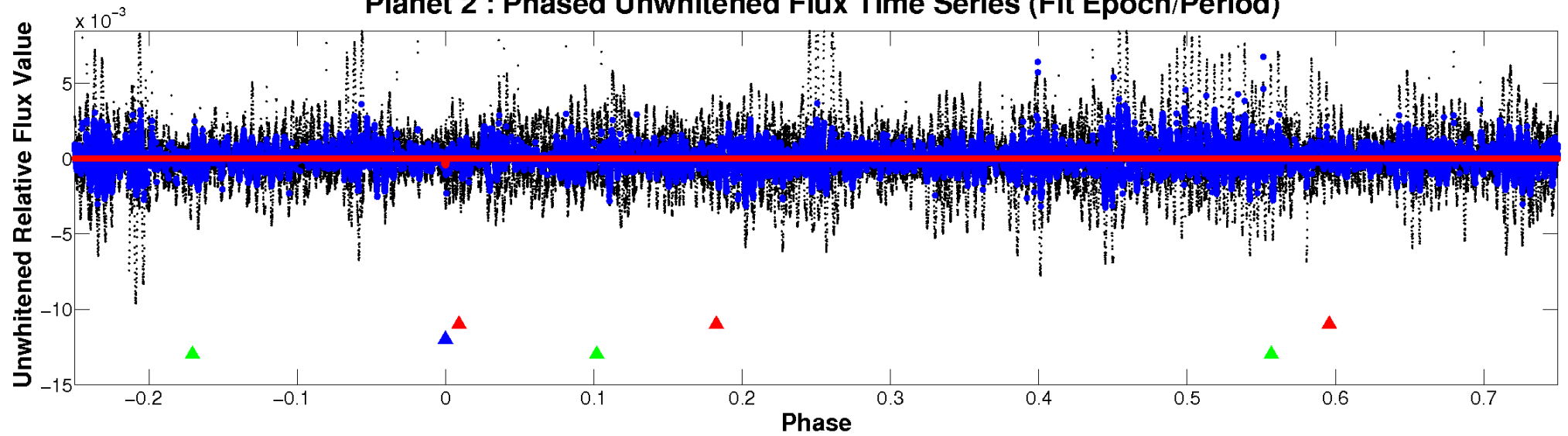
ALT Odd/Even

TCE 003234139-02

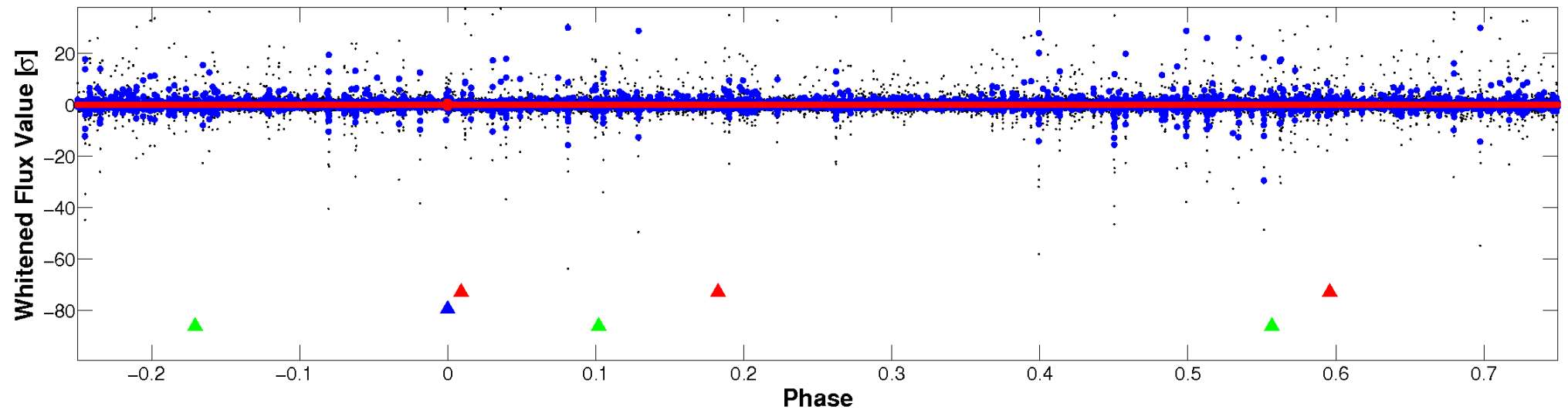


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

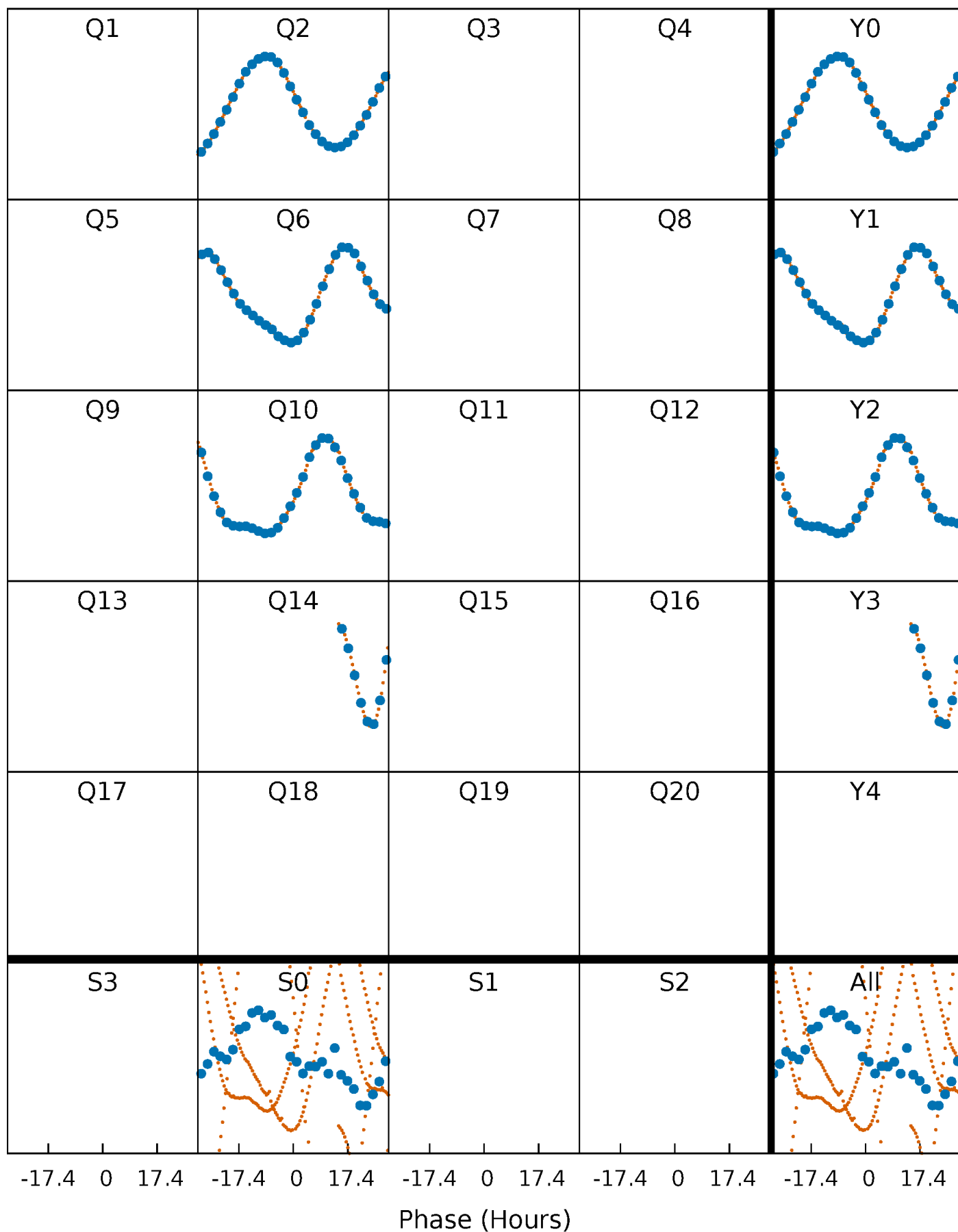


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



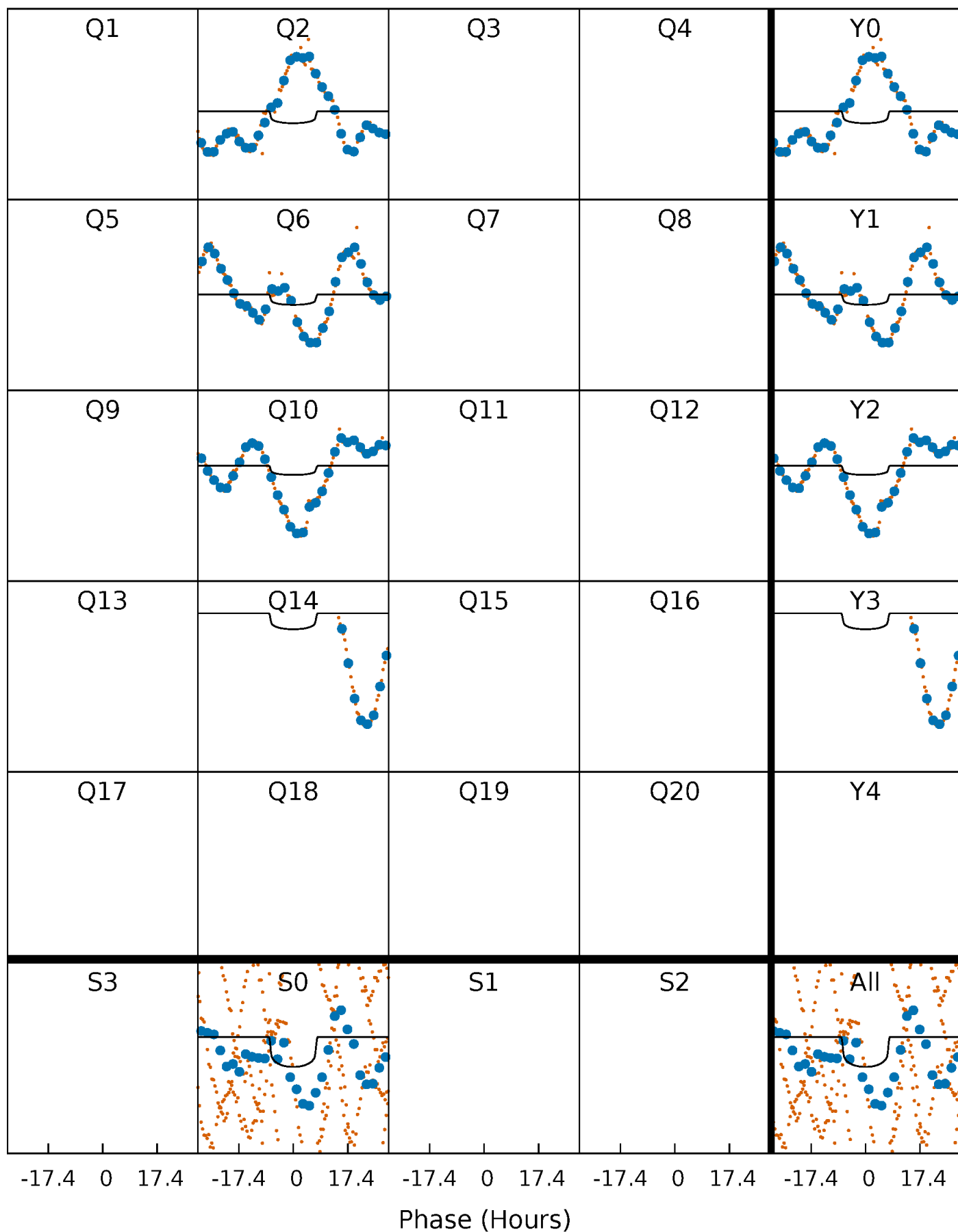
PDC Quarter-Phased Transit Curves

TCE 003234139-02 P=369.897813 Days $T_0=186.115725$ (BKJD)



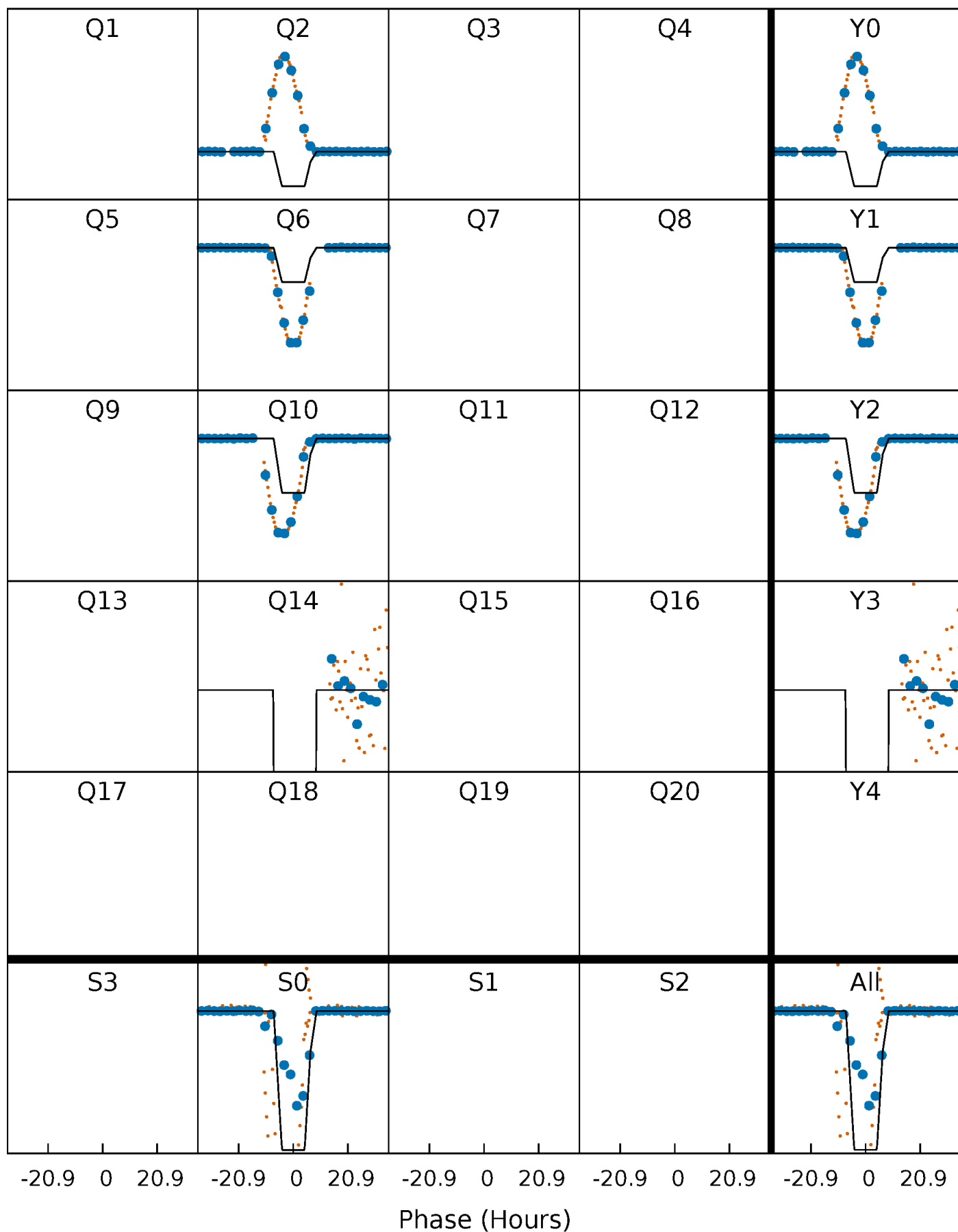
DV Quarter-Phased Transit Curves

TCE 003234139-02 P=369.897813 Days $T_0=186.115725$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

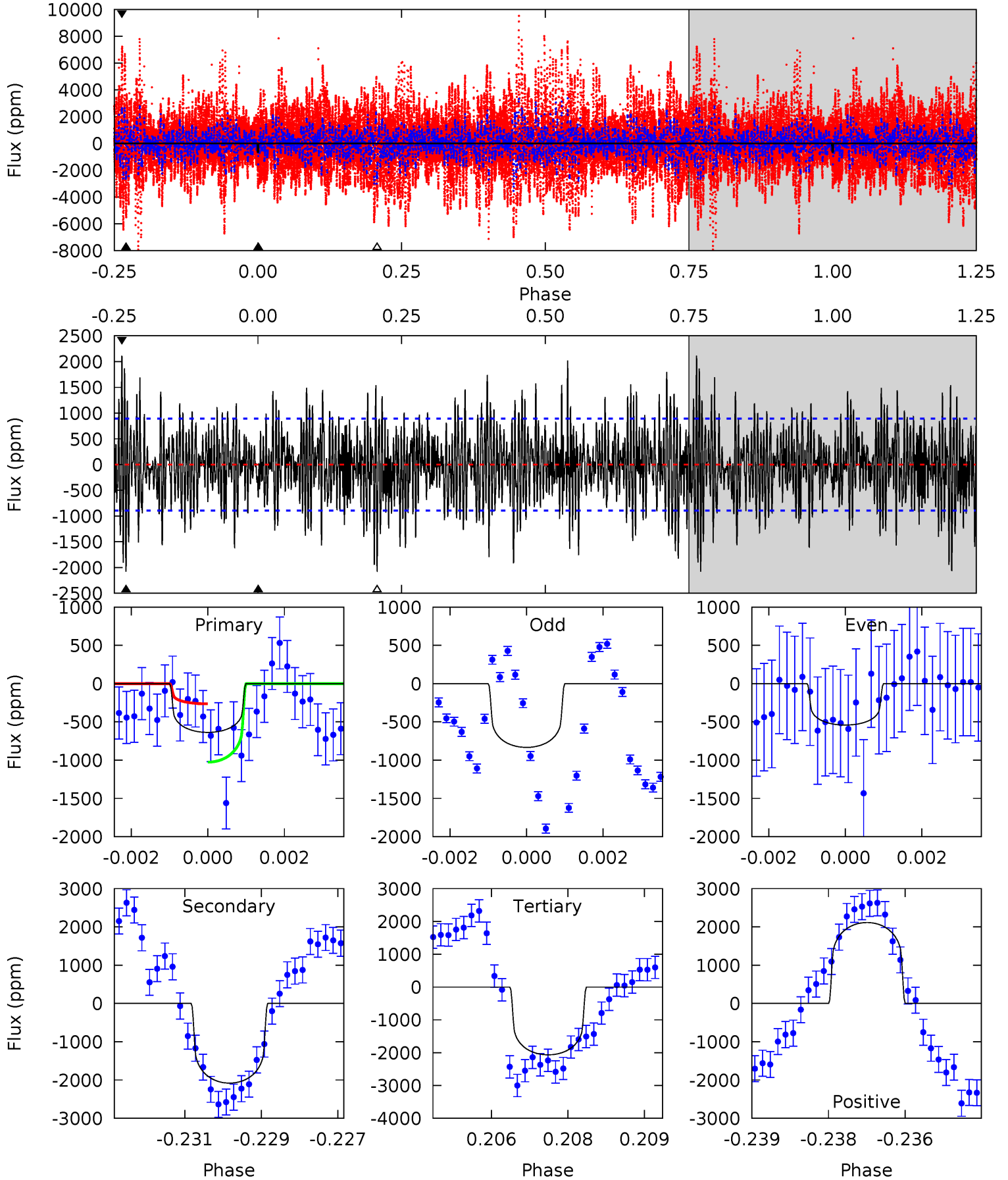
TCE 003234139-02 P=369.901926 Days $T_0=186.145118$ (BKJD)



DV Model-Shift Uniqueness Test

003234139-02, P = 369.897813 Days, E = 186.115725 Days

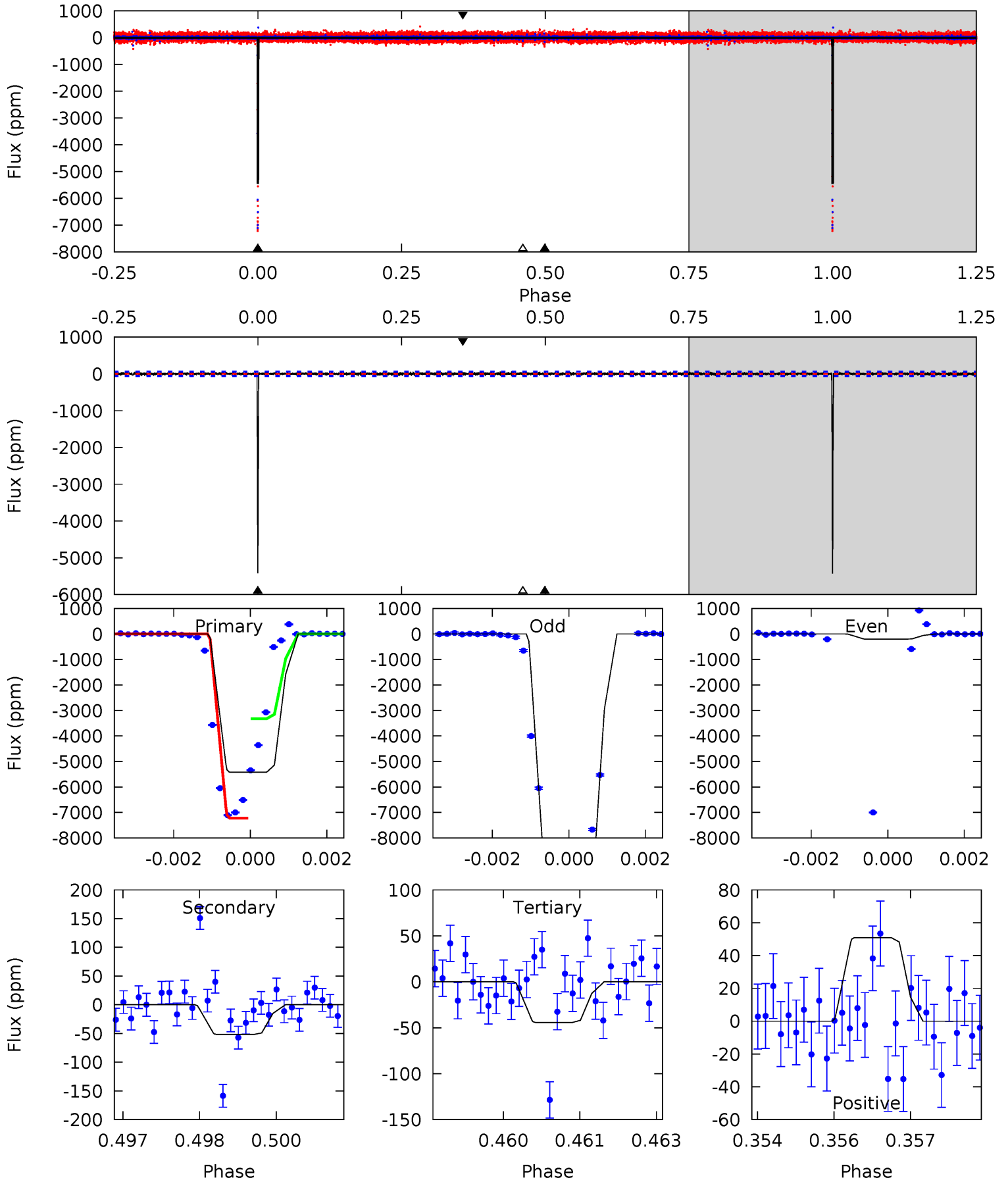
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.82	12.5	12.4	12.7	5.35	3.13	3.63	-8.57	-8.85	0.09	-0.20	0.80	0.74	0.50	2.31



Alt Model-Shift Uniqueness Test

003234139-02, P = 369.901926 Days, E = 186.145118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
475.4	4.53	3.88	4.46	5.37	3.16	0.86	471.6	471.0	0.65	0.07	483.0	0.43	0.01	0



Stellar Parameters For KIC 003234139

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5984^{+188}_{-209}	$4.264^{+0.209}_{-0.190}$	$-0.180^{+0.300}_{-0.300}$	$1.206^{+0.348}_{-0.285}$	$0.975^{+0.156}_{-0.113}$	$0.782^{+0.798}_{-0.400}$
	+3%/-3%	+5%/-4%	+167%/-167%	+29%/-24%	+16%/-12%	+102%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003234139-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2081 ± 167	$2.66^{+0.72}_{-0.66}$	405^{+32}_{-32}	9674^{+1912}_{-1229}	$164339^{+115296}_{-62986}$
Alt.	-52 ± 11	$8.37^{+1.47}_{-1.27}$	405^{+32}_{-31}	2761^{+112}_{-100}	394^{+191}_{-123}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

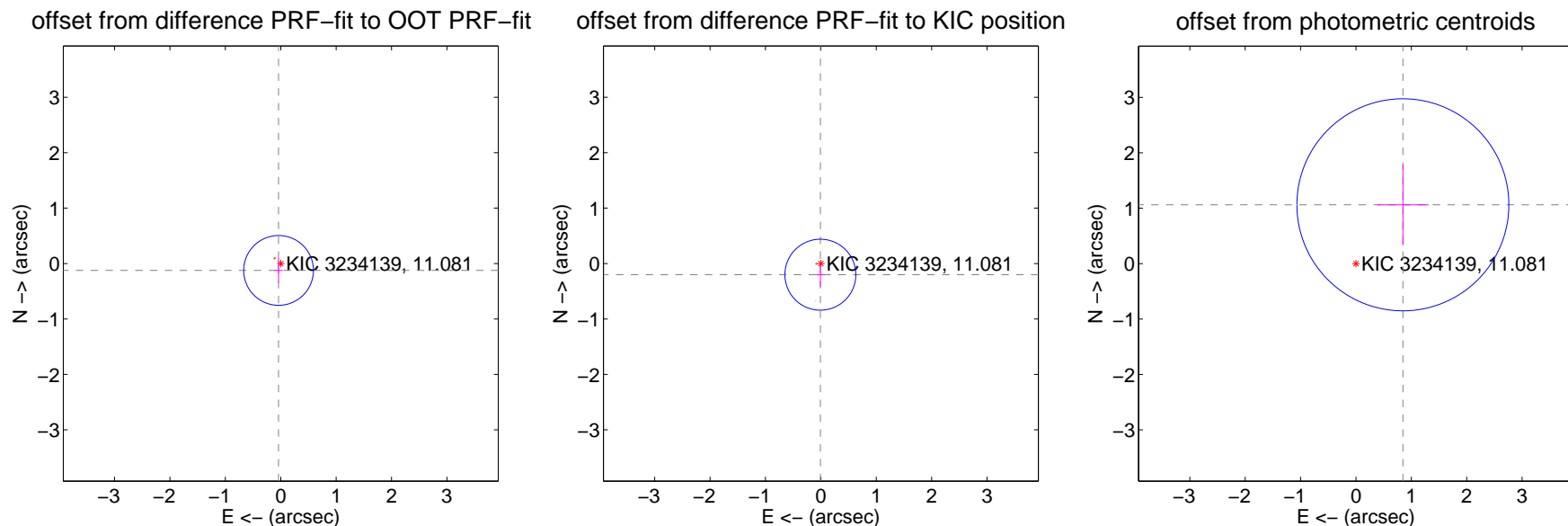
DV Centroid Data

Supplemental centroid analysis for 003234139-02. **Kepler magnitude: 11.08.** Transit SNR 3.90

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.130 ± 0.210	0.62	0.039 ± 0.076	-0.124 ± 0.219
PRF-fit source offset from KIC position	0.202 ± 0.213	0.94	0.009 ± 0.078	-0.201 ± 0.214
photometric centroid source offset	1.36 ± 0.64	2.13	-0.85 ± 0.46	1.06 ± 0.73



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

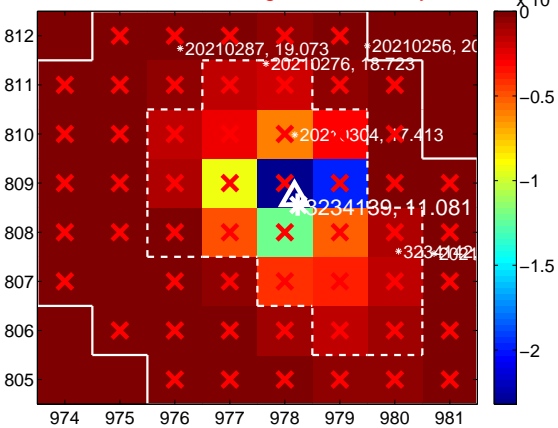
Q1 no difference image



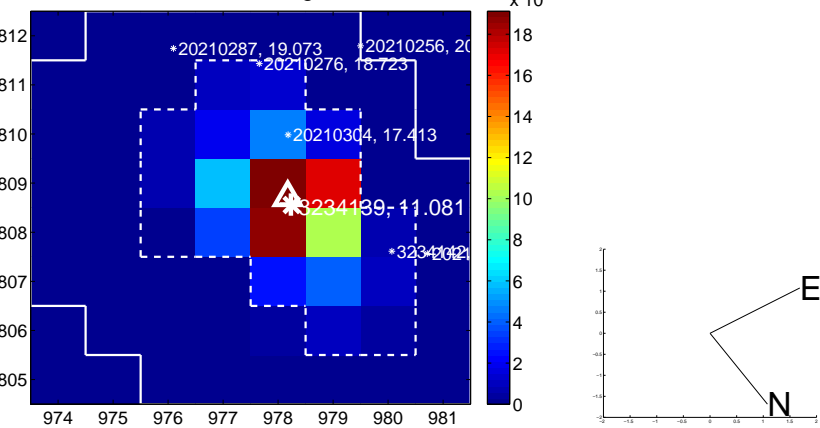
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



Q3 no difference image



Q3 no OOT image



Q4 no difference image



Q4 no OOT image



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

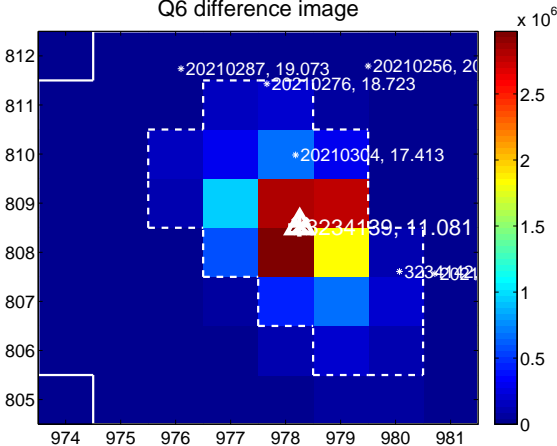
Q5 no difference image



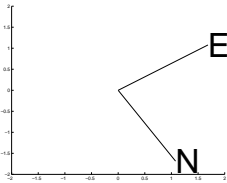
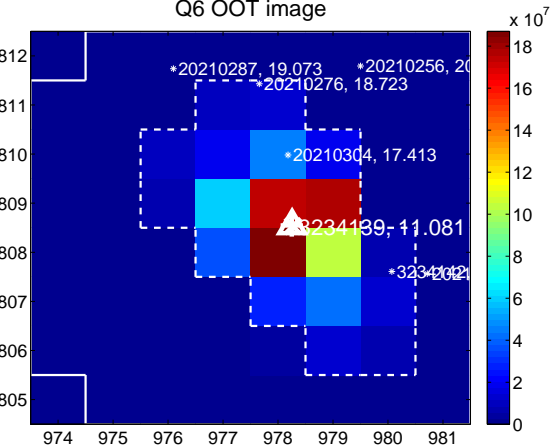
Q5 no OOT image



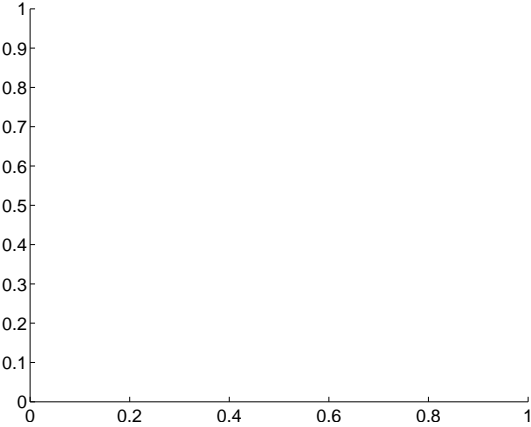
Q6 difference image



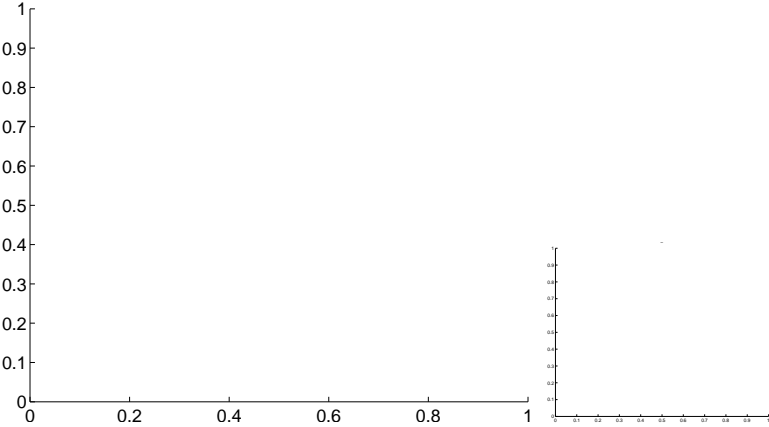
Q6 OOT image



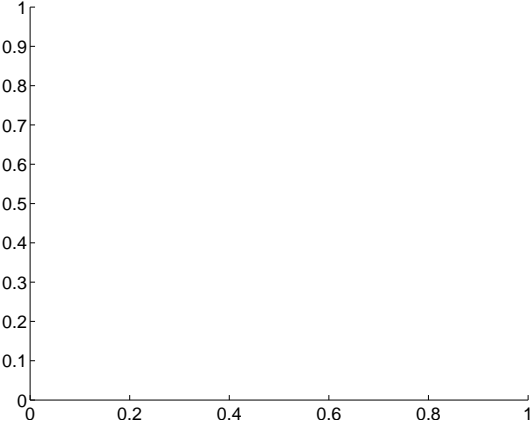
Q7 no difference image



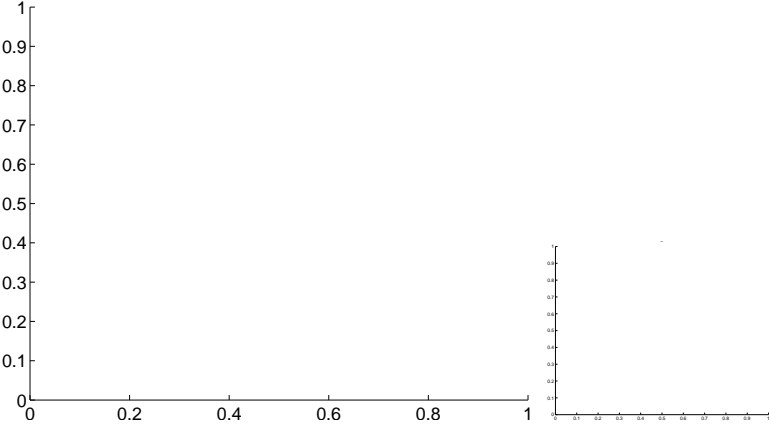
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

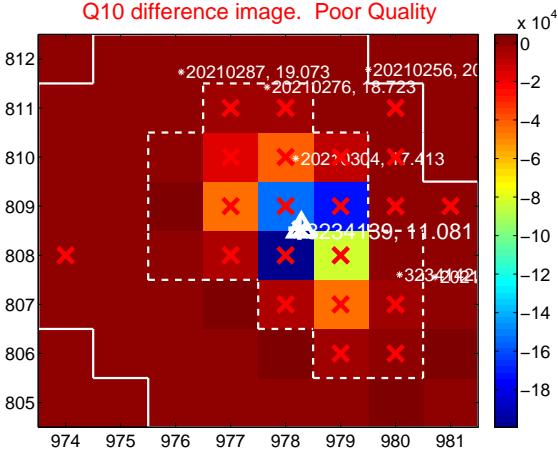
Q9 no difference image



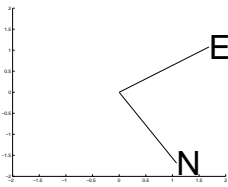
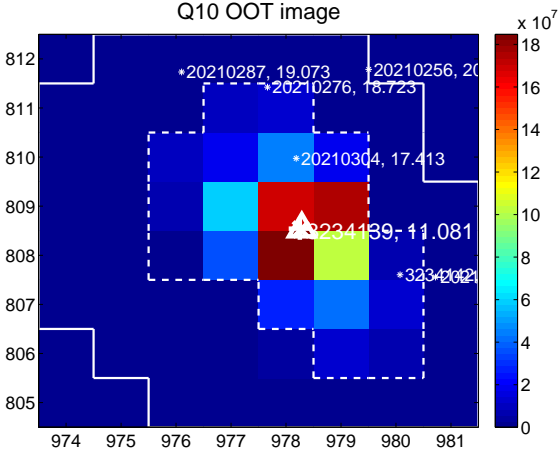
Q9 no OOT image



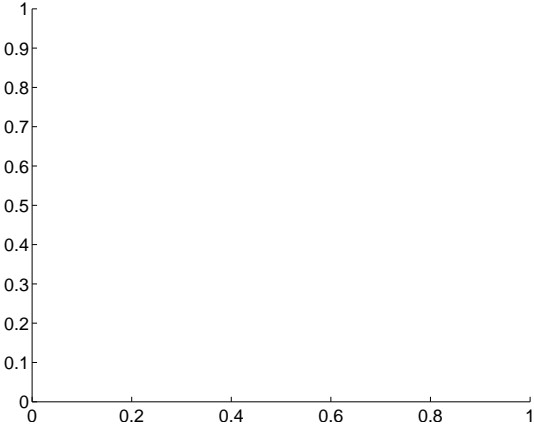
Q10 difference image. Poor Quality



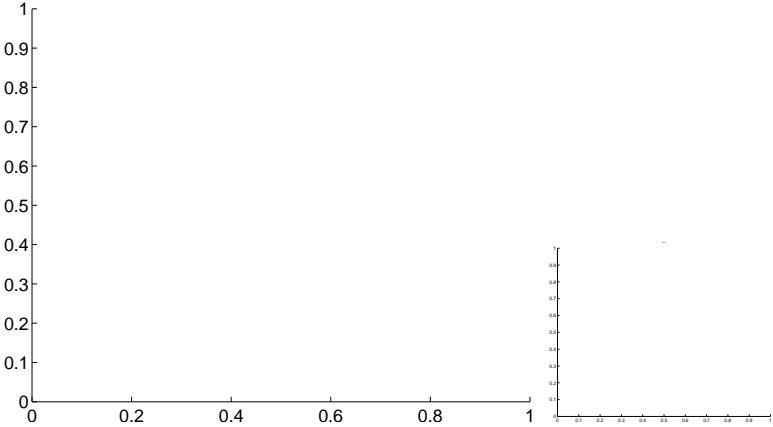
Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



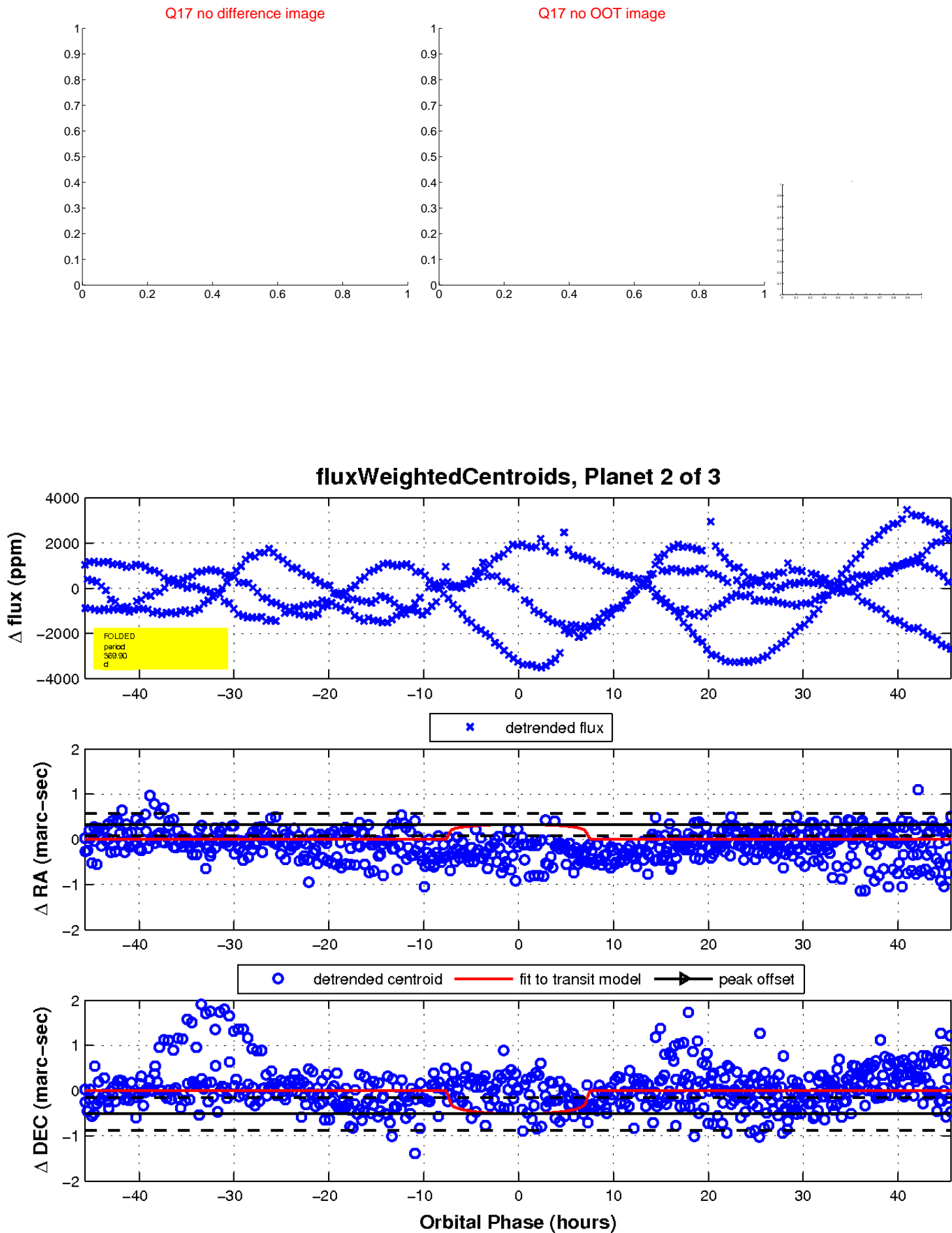
Q12 no OOT image



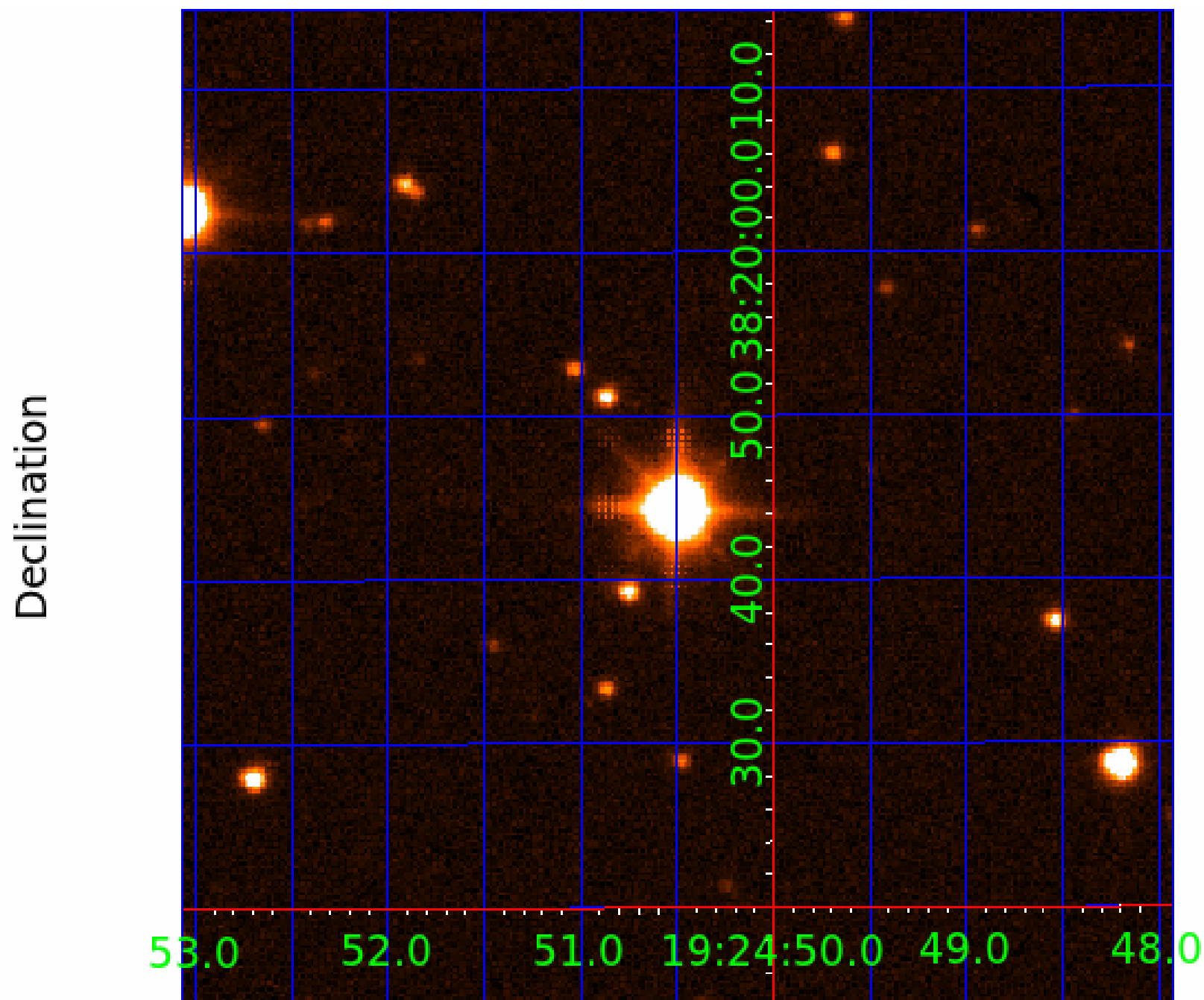
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image



KIC 003234139

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
003234139-01	OBS	No	522.751388	253.671687	75.1	2.885	15.6	1.0	1.21	5984	1.23	1.05
003234139-02	OBS	No	369.897813	186.115725	427.6	15.245	13.8	3.9	1.21	5984	2.67	1.67
003234139-03	OBS	No	638.955452	223.850012	303.6	7.134	12.6	2.6	1.21	5984	2.37	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003234139-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
003234139-02	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED—HALO_GHOST
003234139-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

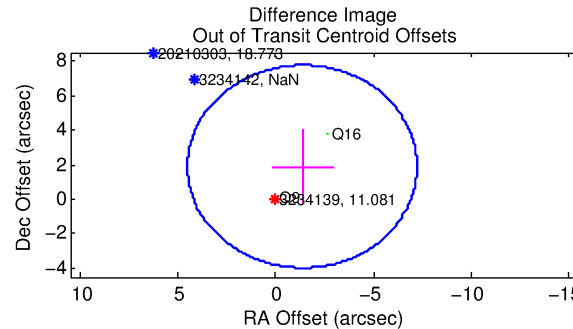
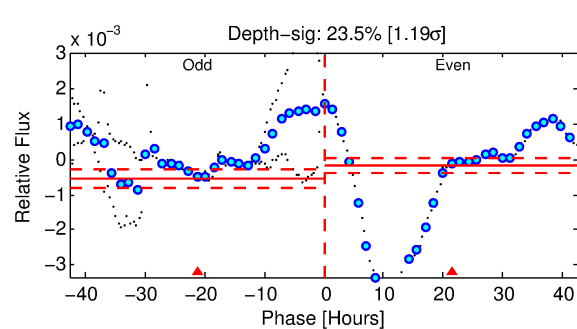
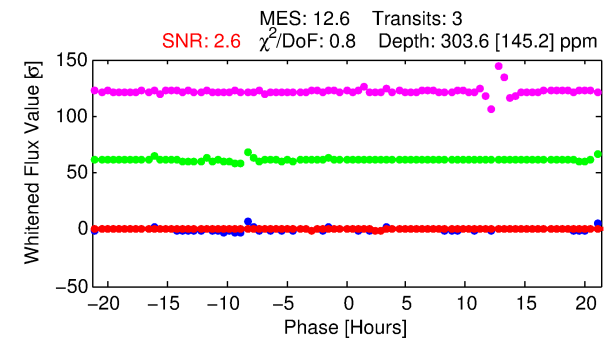
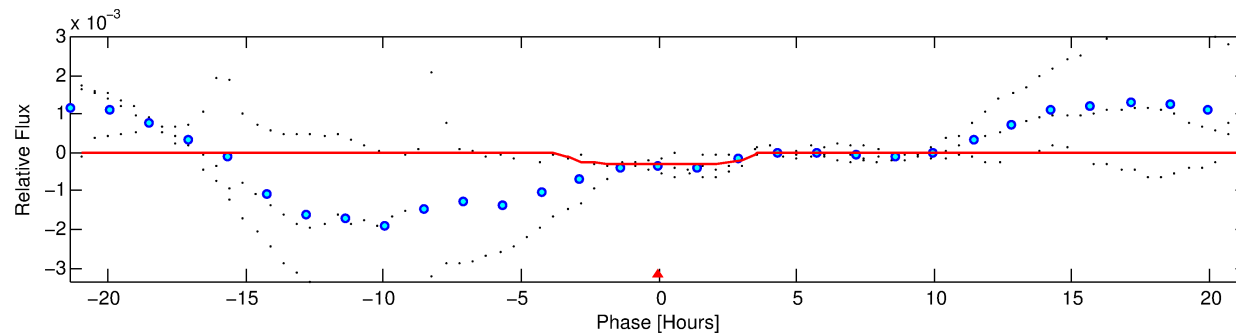
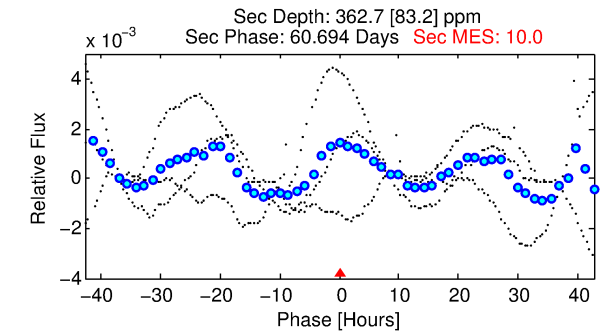
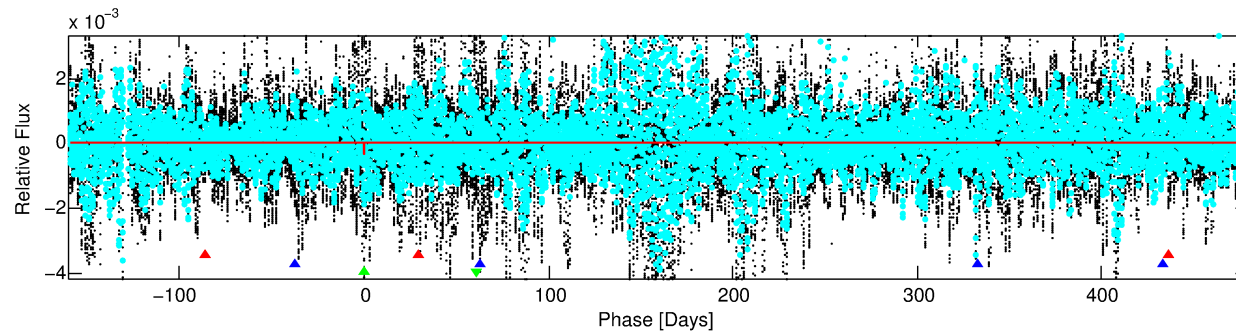
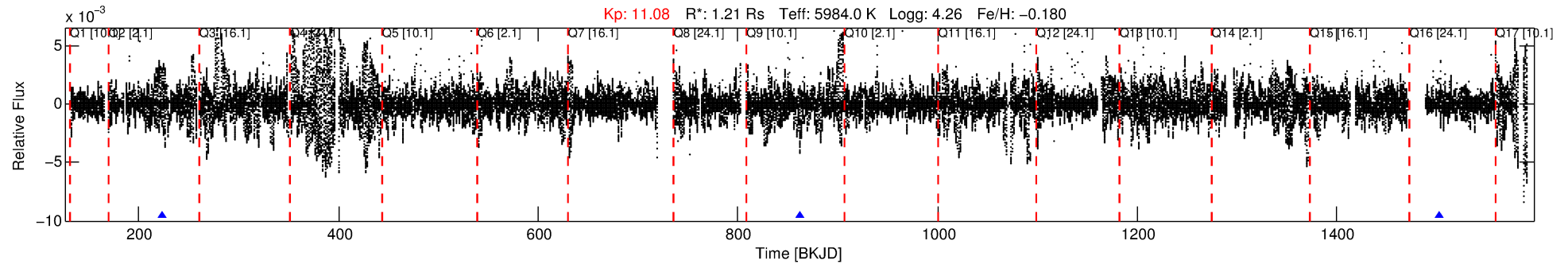
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003234139-03

No Significant Match Found

DV One-Page Summary

KIC: 3234139 Candidate: 3 of 3 Period: 638.955 d



DV Fit Results:

Period = 638.95545 [0.01156] d
Epoch = 223.8500 [0.0147] BKJD
 $R_p/R^* = 0.0180$ [0.0075]
 $a/R^* = 393.76$ [516.60]
 $b = 0.84$ [0.47]
 $S_{\text{eff}} = 0.81$ [0.32]
 $T_{\text{eq}} = 242$ [24] K
 $R_p = 2.37$ [1.20] R_e
 $a = 1.4396$ [0.3606] AU
 $A_g = 73367.47$ [68689.65] [1.07 σ]
 $T_{\text{eff}} = 6148$ [1337] K [4.42 σ]

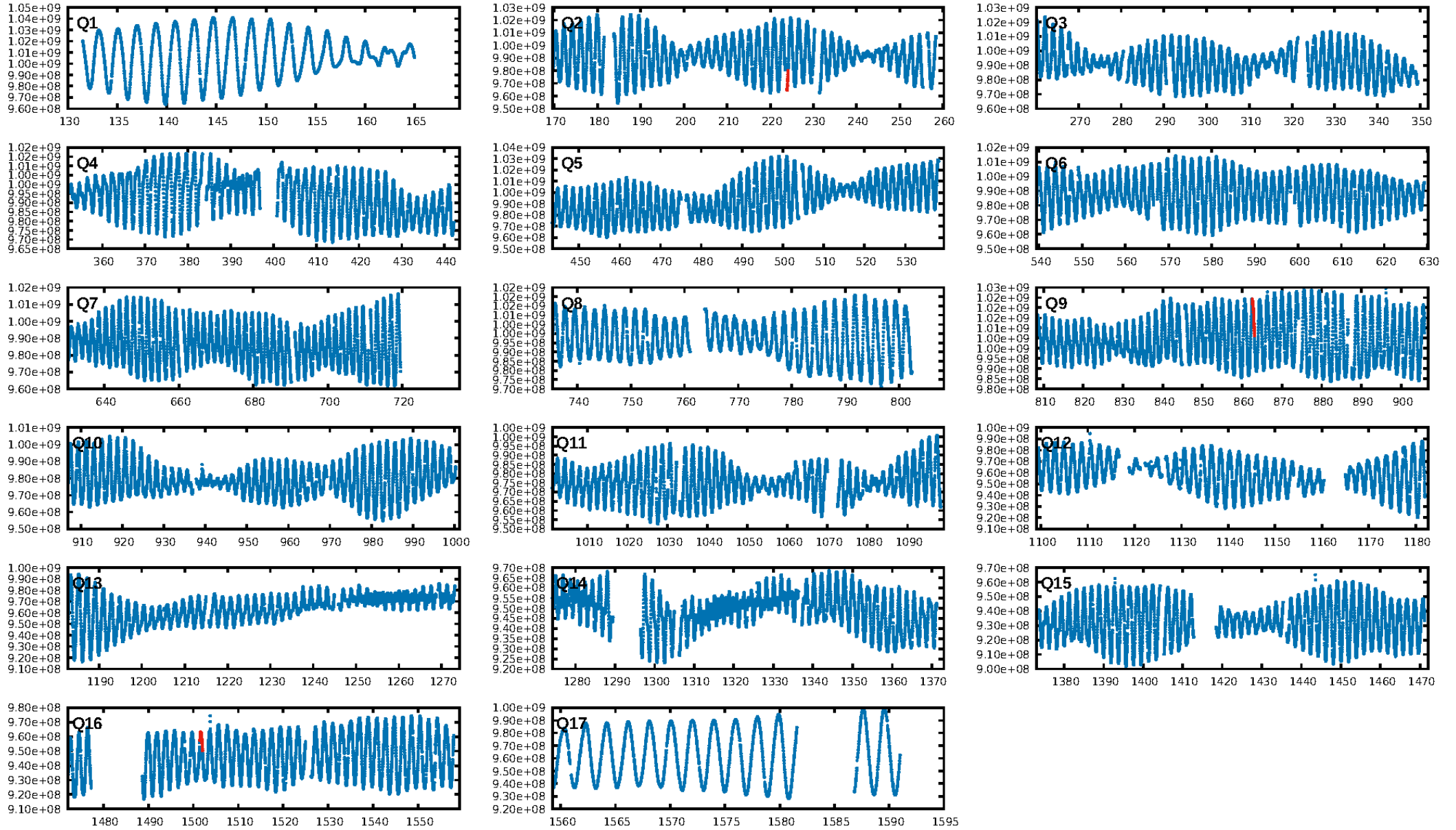
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [362.42 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 8.59e-07
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.726
Centroid-sig: 1.8%
Centroid-so: 1.920 arcsec [1.46 σ]
OotOffset-rm: 2.327 arcsec [1.19 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 2.202 arcsec [1.18 σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

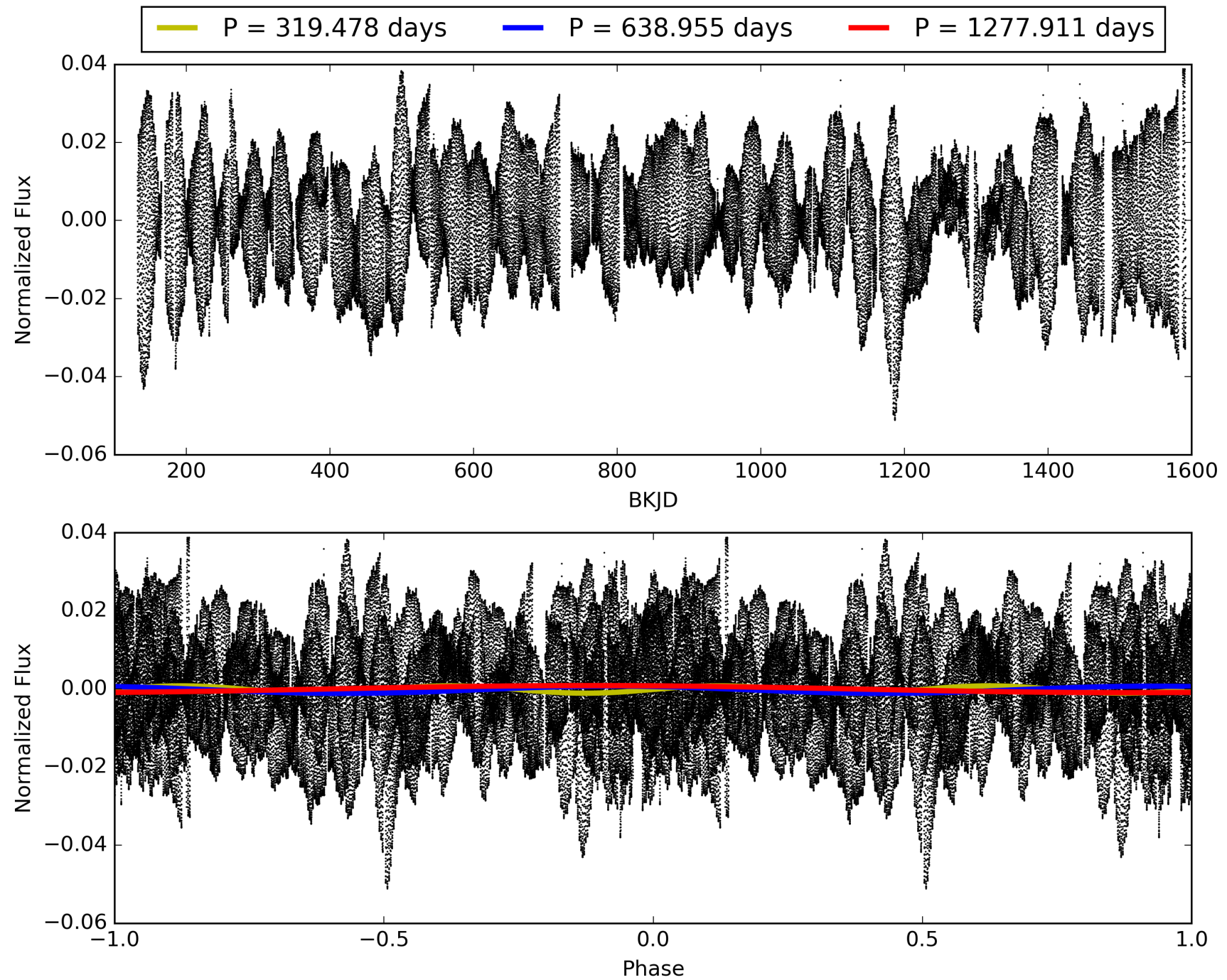
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 06:30:14 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003234139-03, PDC Light Curves

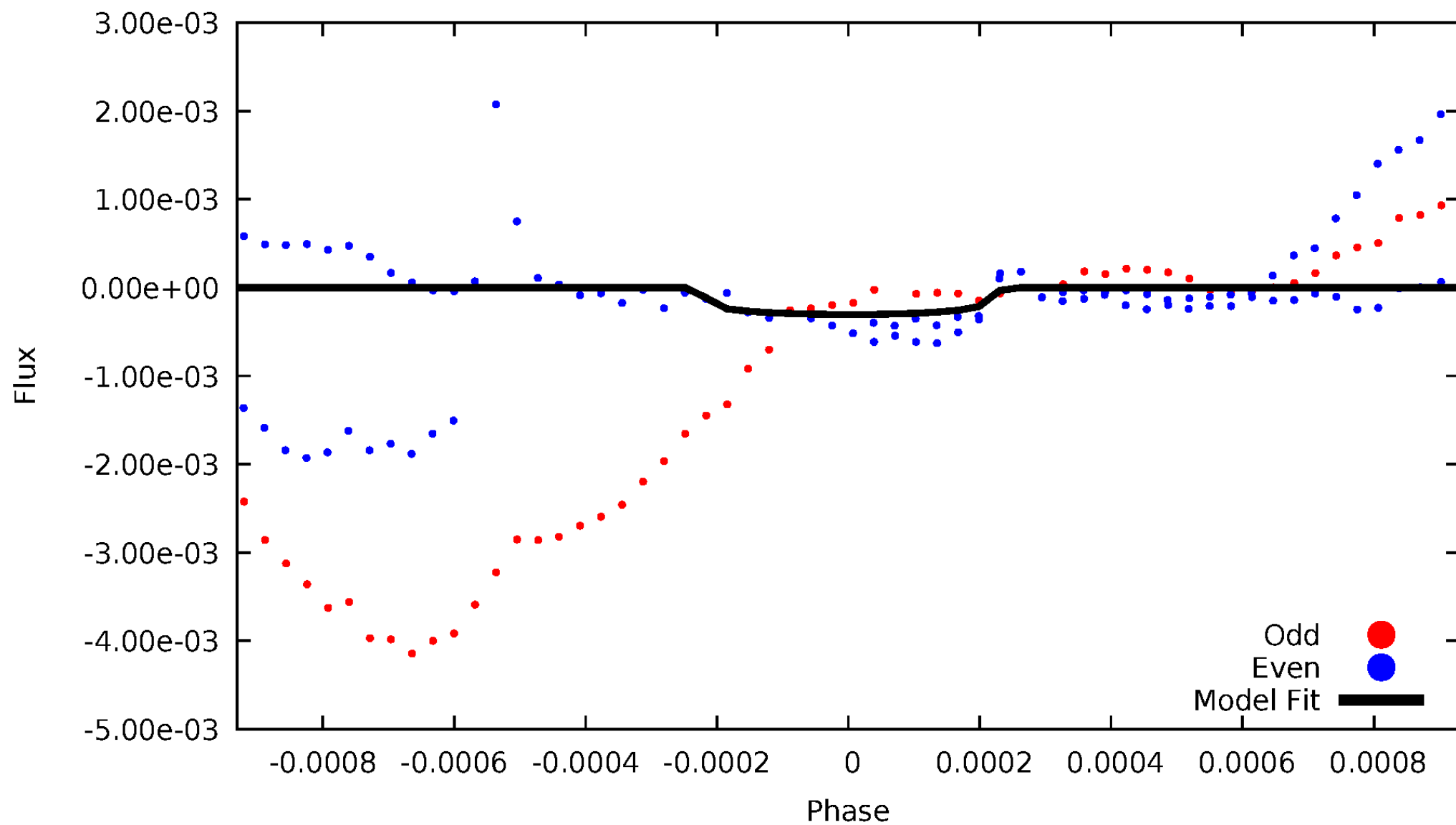


TCE 003234139-03



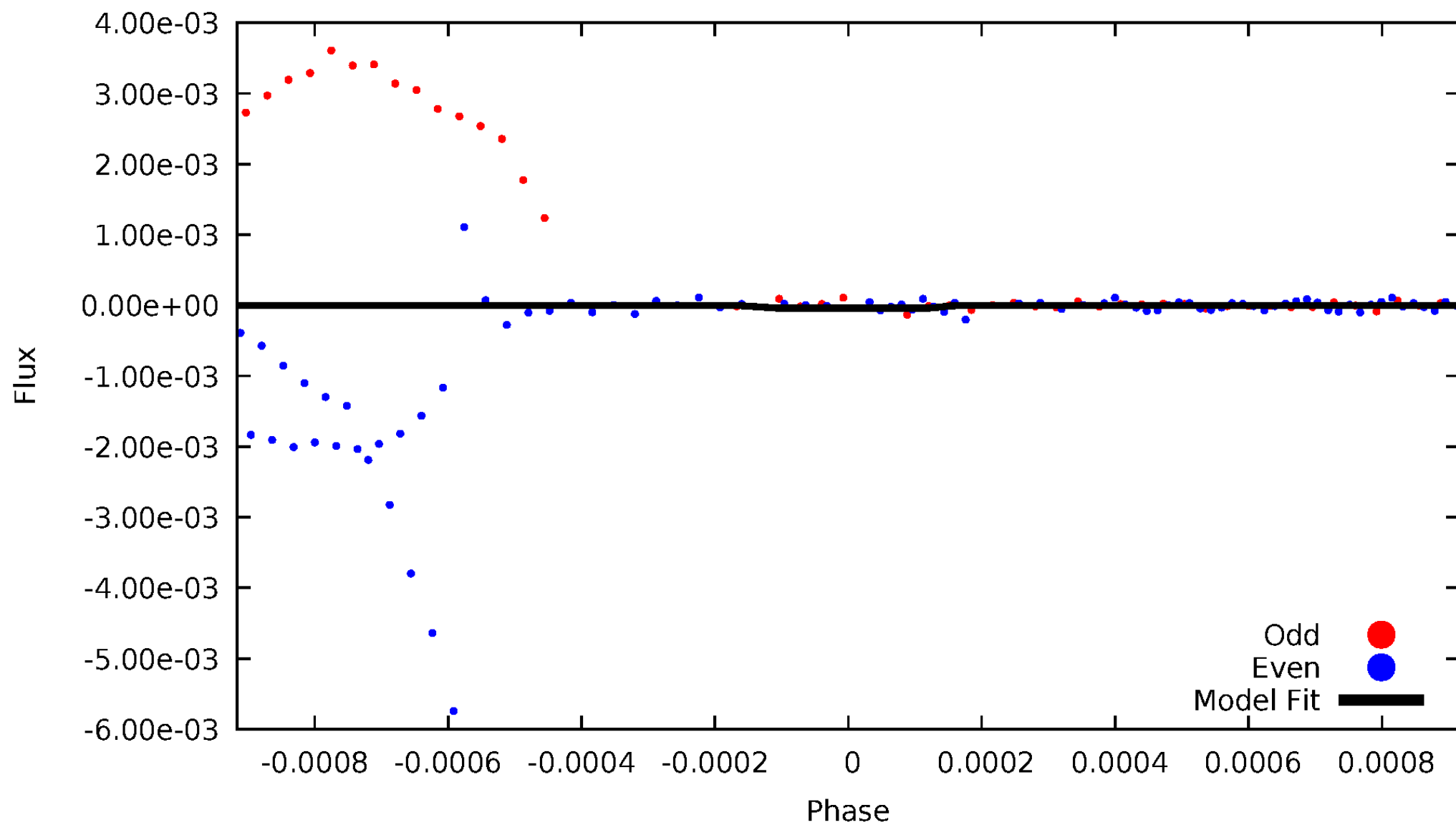
DV Odd/Even

TCE 003234139-03



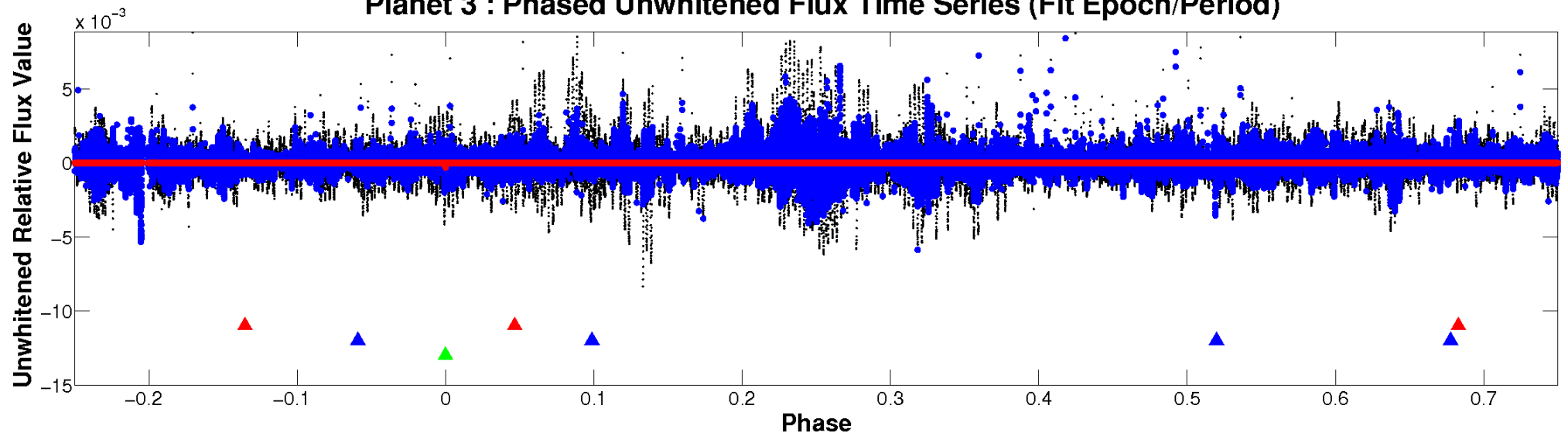
ALT Odd/Even

TCE 003234139-03

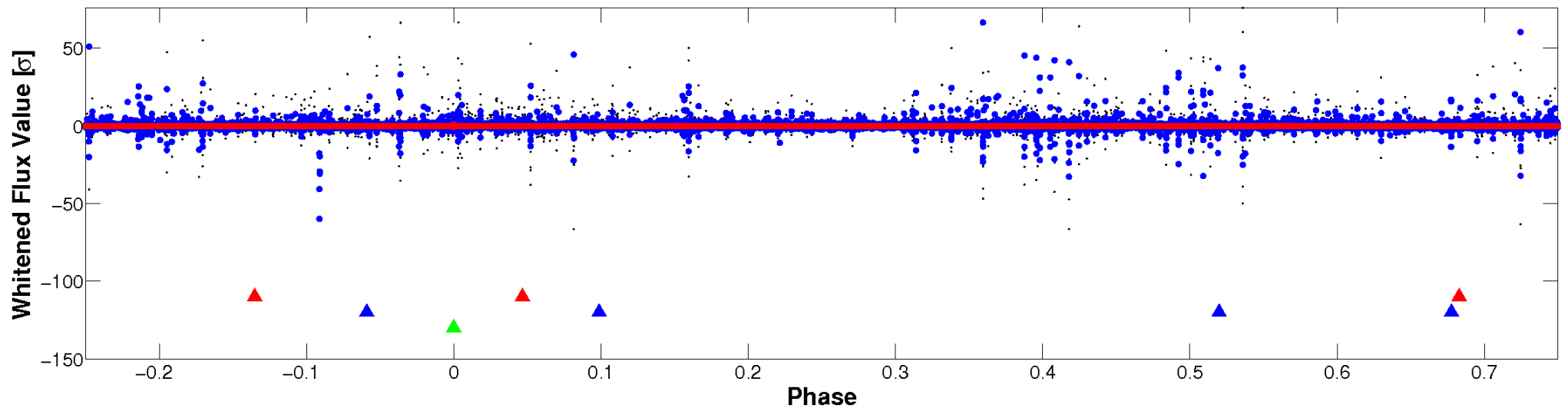


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

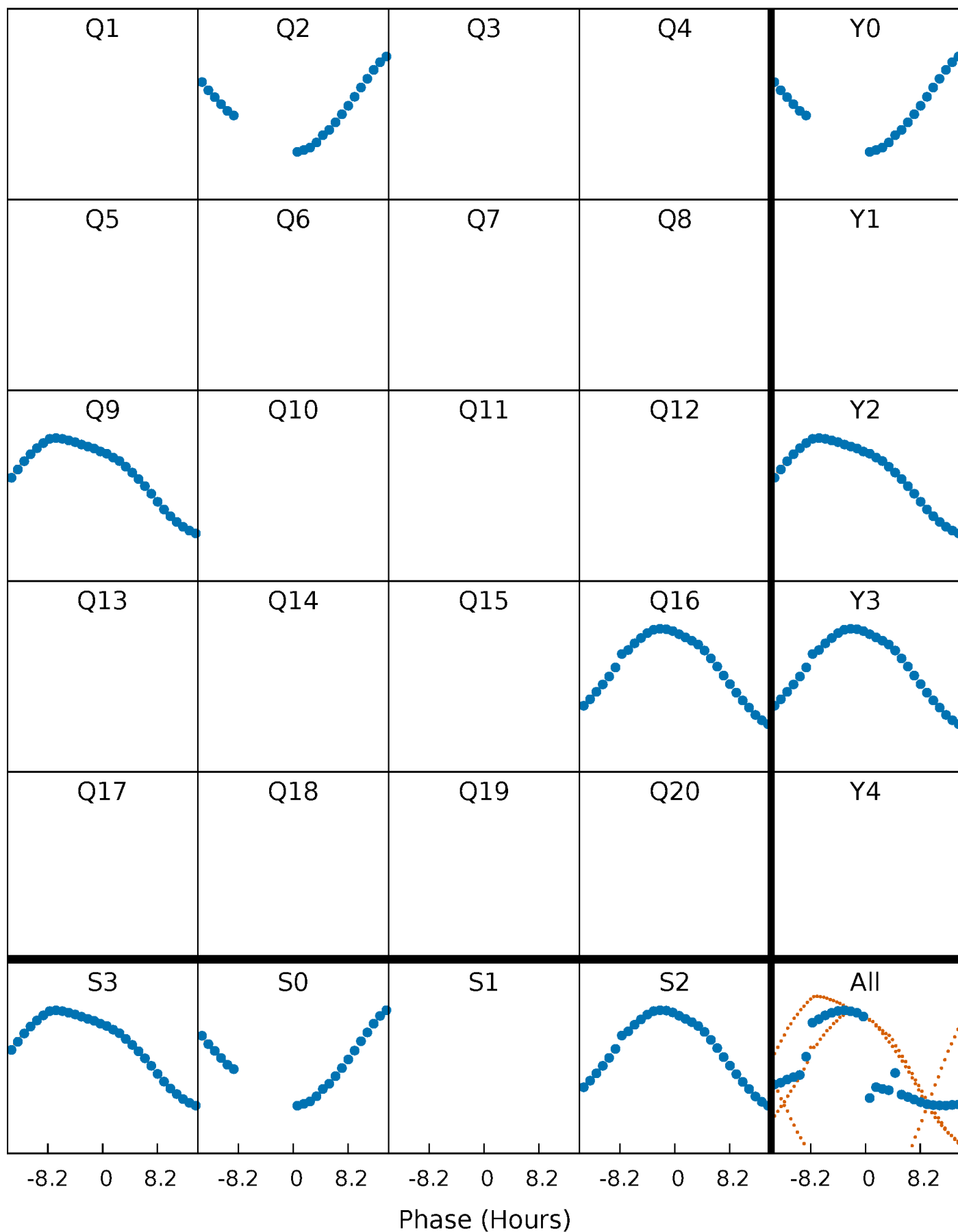


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



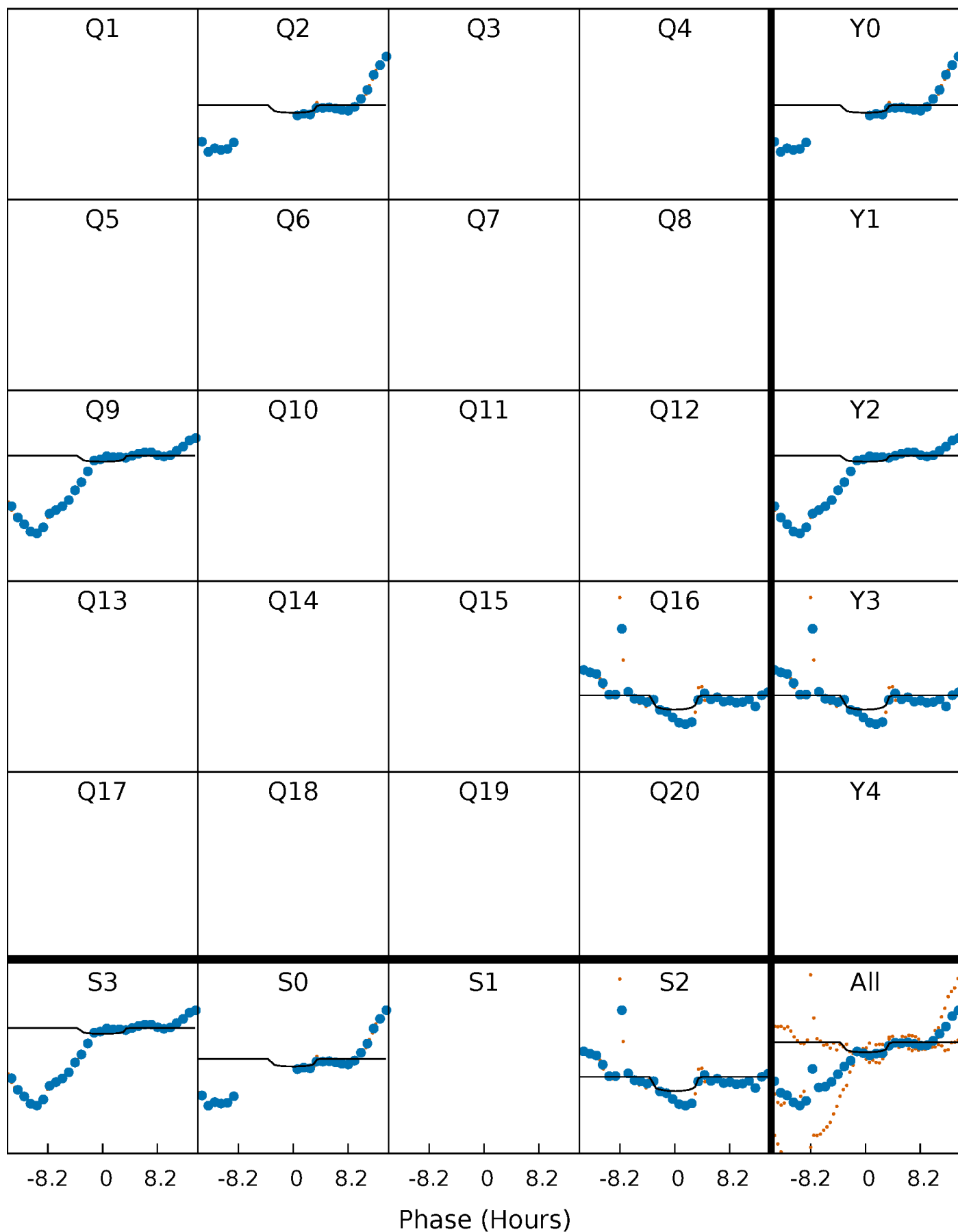
PDC Quarter-Phased Transit Curves

TCE 003234139-03 P=638.955452 Days $T_0=223.850012$ (BKJD)



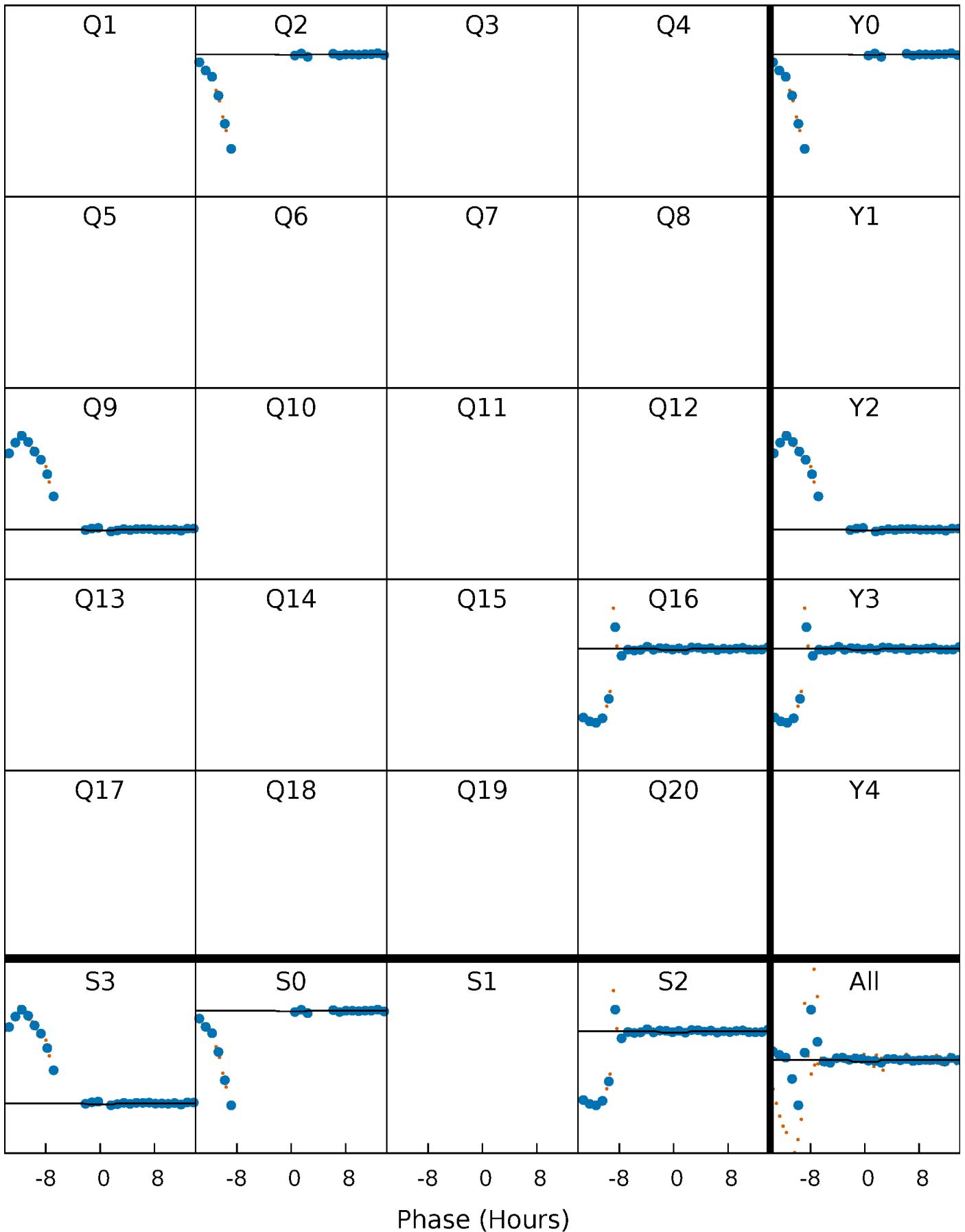
DV Quarter-Phased Transit Curves

TCE 003234139-03 P=638.955452 Days $T_0=223.850012$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

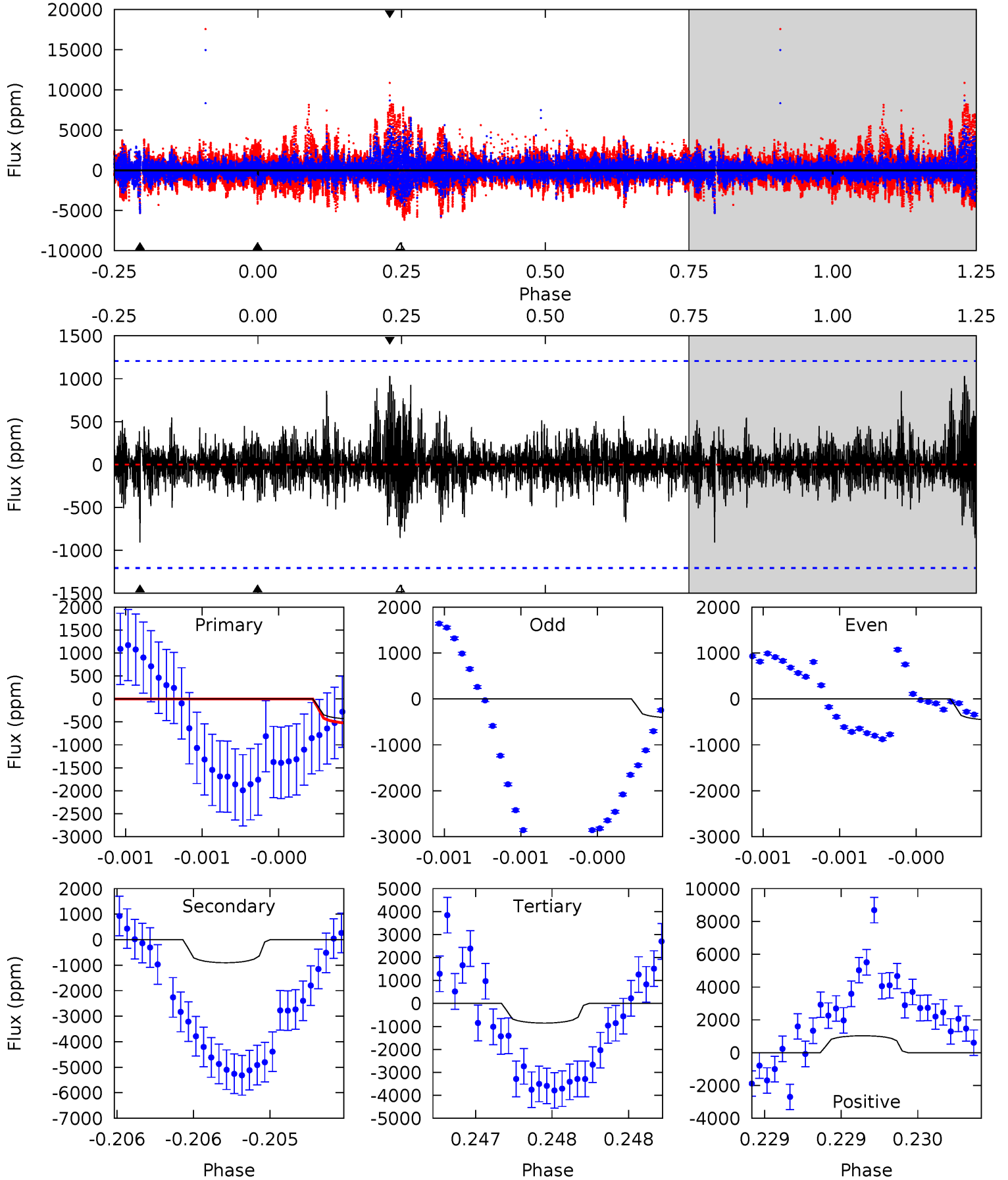
TCE 003234139-03 P=638.971043 Days $T_0=223.843986$ (BKJD)



DV Model-Shift Uniqueness Test

003234139-03, P = 638.955452 Days, E = 223.850012 Days

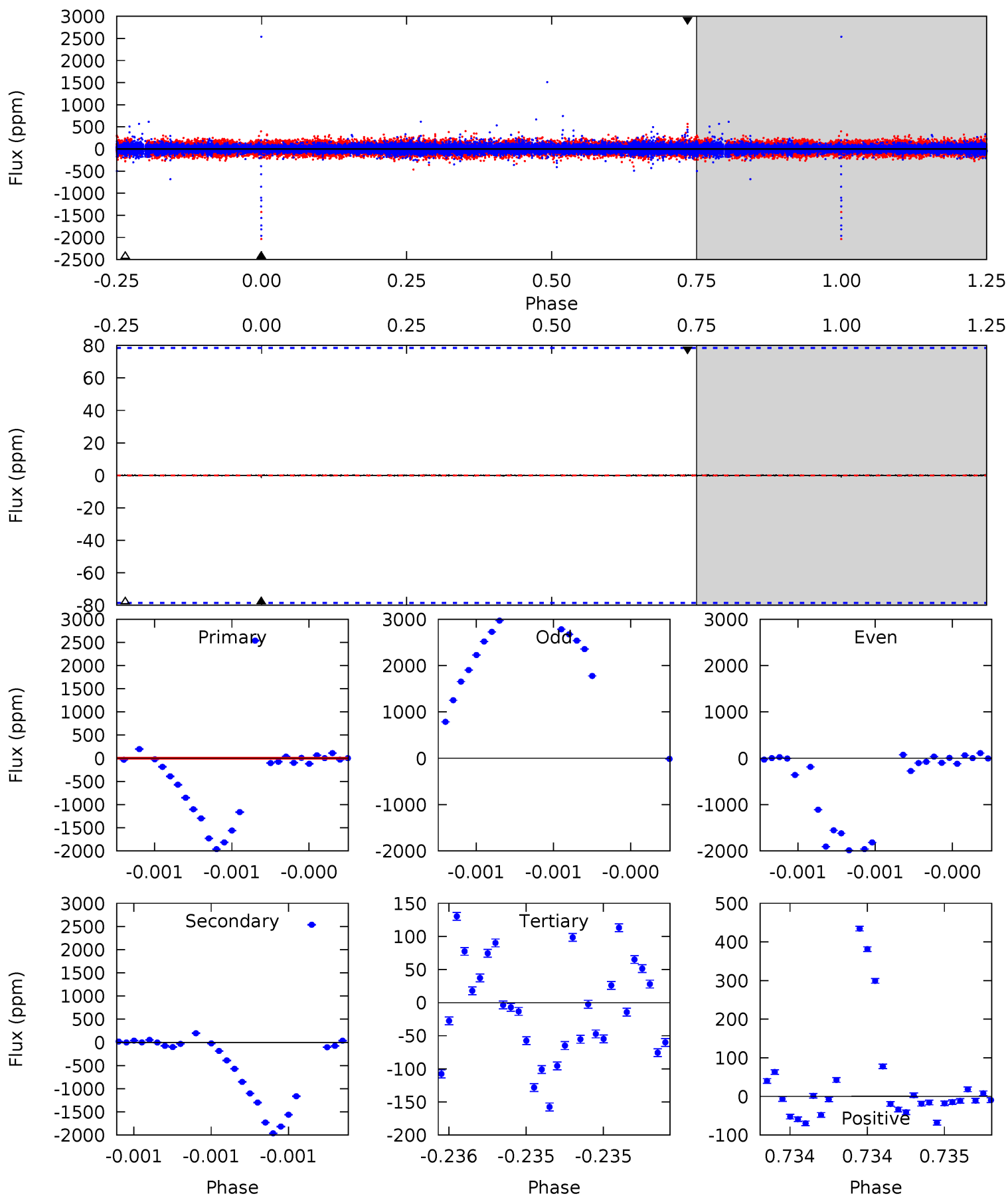
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.03	4.20	3.96	4.78	5.59	3.51	0.85	-1.93	-2.75	0.24	-0.58	0.11	1.05	0.53	0.35



Alt Model-Shift Uniqueness Test

003234139-03, P = 638.971043 Days, E = 223.843986 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.07	0.08	0	0.01	5.65	3.59	0.00	0.07	0.06	0.08	0.07	0.09	0.16	0.15	0.02



Stellar Parameters For KIC 003234139

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5984^{+188}_{-209}	$4.264^{+0.209}_{-0.190}$	$-0.180^{+0.300}_{-0.300}$	$1.206^{+0.348}_{-0.285}$	$0.975^{+0.156}_{-0.113}$	$0.782^{+0.798}_{-0.400}$
	+3%/-3%	+5%/-4%	+167%/-167%	+29%/-24%	+16%/-12%	+102%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003234139-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-906 ± 216	$2.39^{+1.07}_{-0.99}$	336^{+29}_{-26}	7781^{+3632}_{-1467}	$179514^{+361611}_{-98863}$
Alt.	-1 ± 14	$1.03^{+0.90}_{-0.67}$	336^{+27}_{-26}	2719^{+2127}_{-7311}	574^{+23917}_{-19405}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

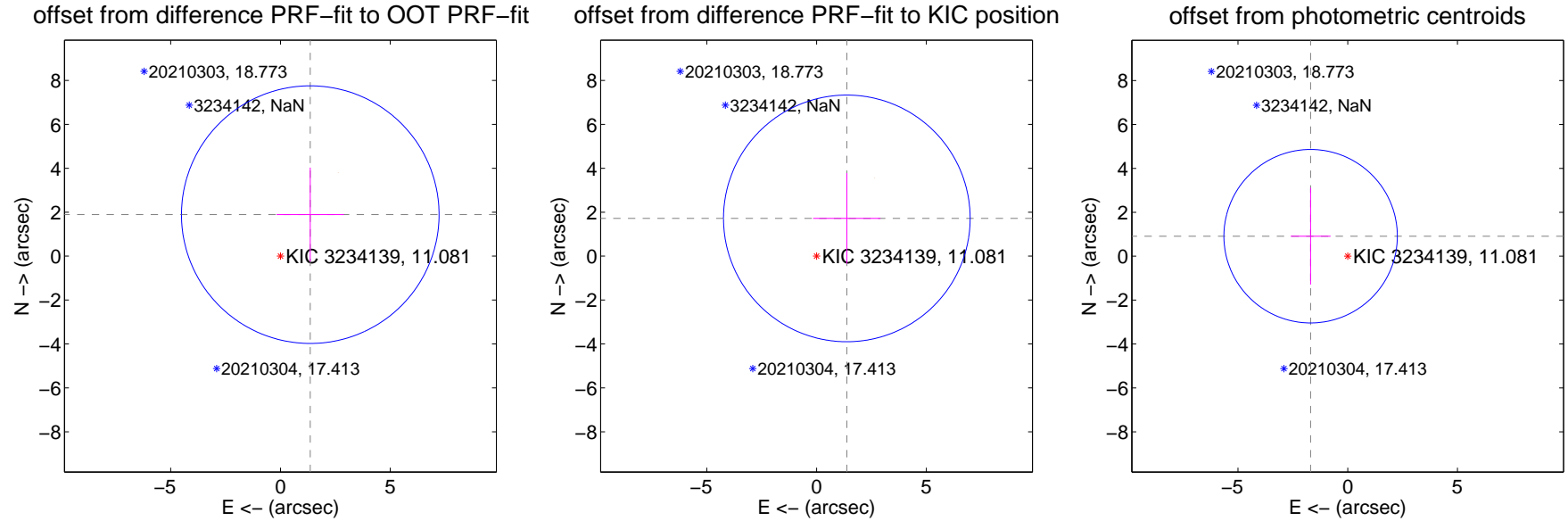
DV Centroid Data

Supplemental centroid analysis for 003234139-03. **Kepler magnitude: 11.08.** Transit SNR 2.61

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.327 ± 1.955	1.19	-1.358 ± 1.533	1.890 ± 2.141
PRF-fit source offset from KIC position	2.202 ± 1.872	1.18	-1.377 ± 1.533	1.718 ± 2.061
photometric centroid source offset	1.92 ± 1.32	1.46	1.69 ± 0.91	0.91 ± 2.20



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

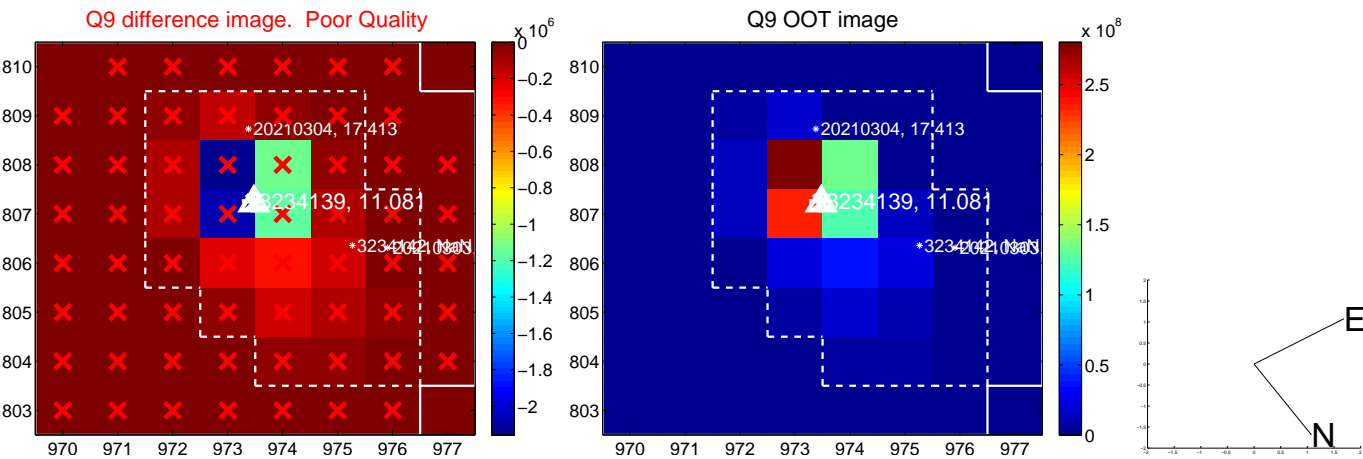
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



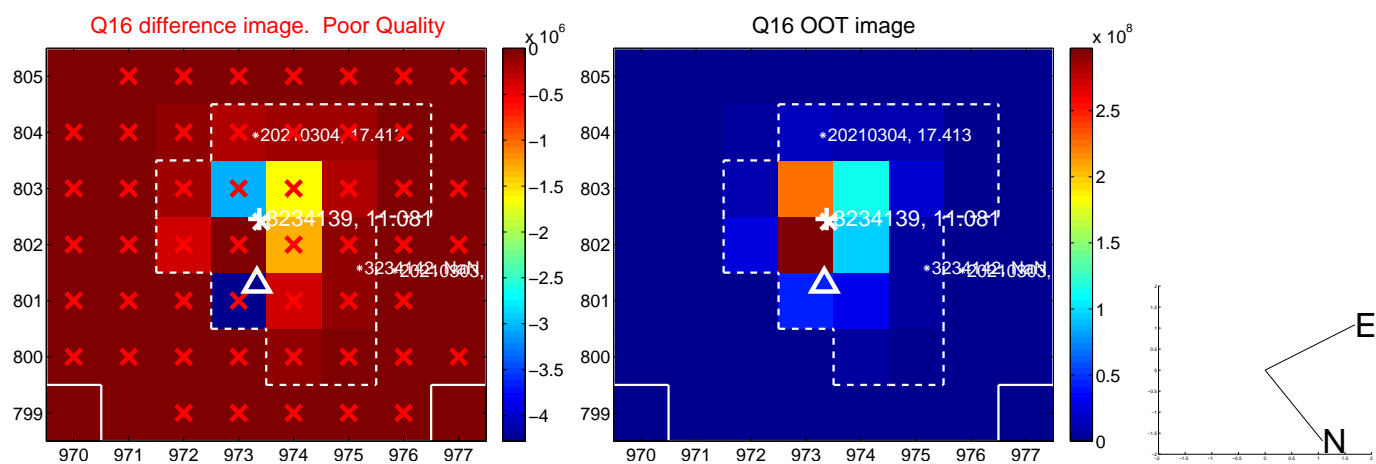
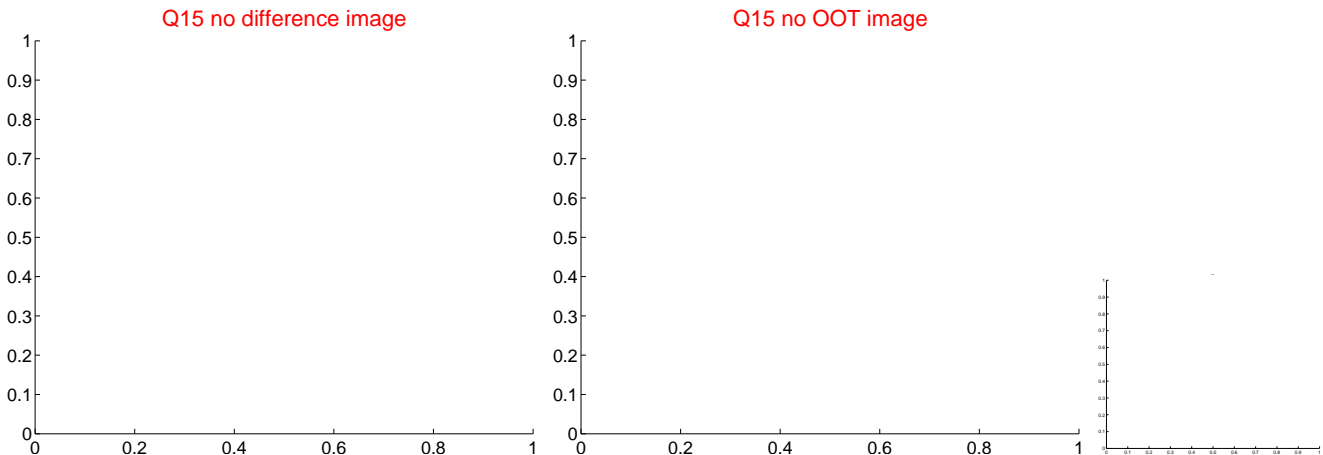
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



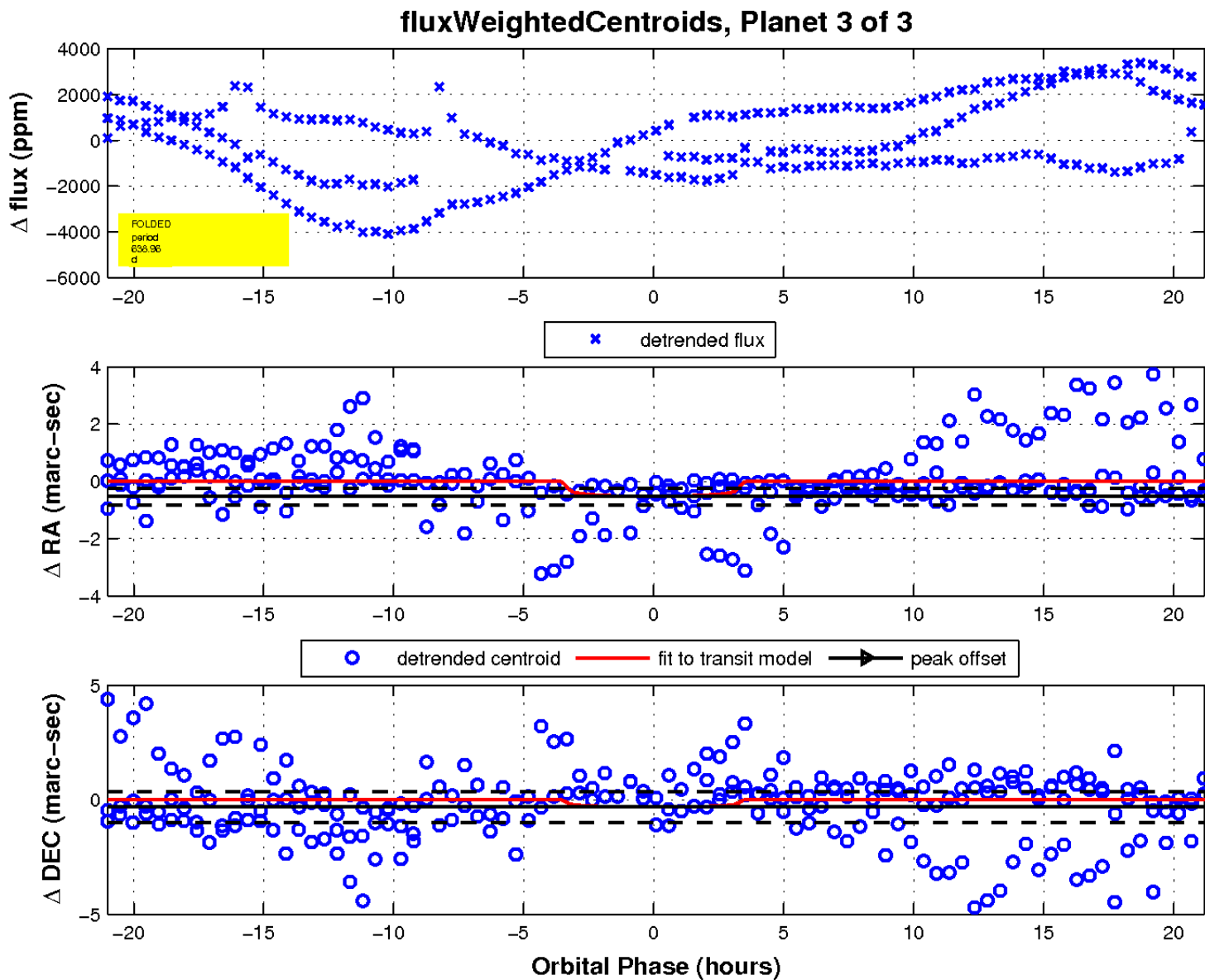
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

